

A N N U A L R E P O R T

2003



B R N O U N I V E R S I T Y O F T E C H N O L O G Y

# ANNUAL REPORT 2003



The annual report on BUT activities in 2003 is submitted as required by the Higher Education Act no. 111/1998 Sb. It has been drawn up with respect to the guidelines on the activities of a university in 2003 published by the Ministry of Education, Youth, and Sports of the Czech Republic. It provides the general public with data and essential results of all the activities that Brno University of Technology performed as part of the Czech and international higher education and research system.

Brno University of Technology  
Antonínská 548/1, 601 09 Brno  
tel.: +420 541 141 111  
e-mail: [vut@vutbr.cz](mailto:vut@vutbr.cz)  
<http://www.vutbr.cz>

# Brno University of Technology

■ introduction	6
■ I BUT senior officers	8
■ II organisational structure of BUT	8
■ III composition of BUT bodies	9
■ IV education	9
■ V scientific creative activities (research and development)	11
■ VI information and communication technology	13
■ VII library information services	17
■ VIII publishing and editing	18
■ IX academic staff	18
■ X international co-operation and education	19
■ XI other BUT activities	21
■ XII student care	23
■ XIII development of BUT	24

■ XIV other data required by the management board of a public school of higher education	25
■ XV changes of internal regulations	26
■ XVI activities of the faculties and departments BUT	
■ Faculty of Civil Engineering	27
■ Faculty of Mechanical Engineering	33
■ Faculty of Electrical Engineering and Communication	39
■ Faculty of Architecture	44
■ Faculty of Business and Management	49
■ Faculty of Chemistry	54
■ Faculty of Fine Arts	59
■ Faculty of Information Technology	65
■ departments	70
■ tables	82

## INTRODUCTION

6

This Annual Report by the Brno University of Technology (BUT) shows, in the form of texts and statistical data, the progress made during 2003 in our school's core activities: education, science and research in the areas of engineering and economics, applied natural sciences, art and architecture, and connections and cooperation with Czech and foreign universities, the industrial sphere, and other institutions.

The activities undertaken by BUT in Brno in 2003 correspond to the updated Long-term Development Plan, which is designed to fulfil our credo of providing education to all applicants who wish to study at our university and have the necessary prerequisites to cope with a demanding programme of studies. As an institution we react to the current needs of modern society, and to the interests of young people in promising areas of study. The process of education takes place in an environment in which science and research are cultivated, which in turn allows the creative talents of the students to develop. In its core areas the university fully meets the standards of a research institution.

At present BUT has eight faculties. BUT offers the broadest spectrum of technical studies of any university in the country. It offers a wide range of technical disciplines, along with economics and the arts related to technical studies. It is ideal ground for the creation of interdisciplinary study programmes or disciplines (mechatronics, materials engineering, biomedical engineering, industrial design, combined techno-economic or information-economic disciplines, etc.), of which some become the basis for further scientific or technological development. BUT's modern and forward-looking system of education attracts consistent interest on the part of young people in attending studies. The overall number of students attending grew in the 2003/2004 academic year to 17,561 which is 1,821 more than the year before. There were 1,821 doctorates awarded. The majority of our graduates have no trouble finding jobs, and a good professional education enables them to apply their talents in many areas of society.

Today every modern university is aware of the important European dimension of education, especially in view of our joining the European Union on 1 May 2004. The accreditation of study programmes at the Faculty of Civil Engineering in 2003 was the culmination of change in the structure of education at all the university's faculties to a three-degree system consisting of Bachelor's, Master's, and doctoral studies, in accordance with the Bologna process for creating a unified European education system. The international mobility of students and academic personnel is on the increase, especially in those EU countries which also provide support with their own funds.

The field of science, research, and other creative activities remains our long-term focus. The influence of Research Projects and Research Centres has been positive; new focus teams have been created, and participation on the part of doctorate students and graduates from these programmes has increased. The number and overall volume of successful domestic and international research projects in all categories including the 6th general EU program, illustrates the leading position of BUT among Czech universities, and compares well internationally. In 2003 a number of important results and awards were achieved, from 1st place in the "RoboCup 2003" rescue robot world championship in Italy, to the eight prizes won at the "Excellent Product of the Year" contest put on by the Design Centre Czech Republic, in which three entries were awarded the title Excellent Design, and five Good Design.

Interaction with industrial, civil engineering, and other institutions is very important for a university of this character, whether through work on various joint research projects, or direct cooperation. I am

convinced that in this area we can make a significant contribution to innovative engineering, and thus to competitiveness on the world market with the corresponding economic benefits. There is a project to develop a new tourist airplane dubbed the VUT 100 for four or five passengers, of which prototypes are now being produced by the company EVEKTOR a.s., in Kunovice. Another milestone in the school's history was the opening of BUT Technology Incubator on 16 September 2003, attended by Phillip Busquin, European Commissioner for Science and Technology. Here, selected small firms can find support in realizing their original ideas for new and interesting products, mostly in the high-tech category. BUT helps provide companies with technical assistance and expertise; financial and marketing support is arranged through the South Moravia Innovation Centre, financed by the Region of South Moravia and the City of Brno. There are twelve firms at work on the Incubator at present, and its first product has been put on the market. The quick set-up and start of the Incubator is also a motivation for creative and diligent graduates or even students to set up their own firm and apply their talents. It is very important to develop such skills at the present time, as they will be crucial for our standing in Europe, and for our contribution to knowledge and technological development within the EU.

To build a university takes long years, and depends on the efforts of everyone involved. It is the kind of thing that takes generations. I am convinced that in the last year our alma mater has made good progress.

Brno, 9 April 2004

Prof. RNDr. Ing. Jan Vrbka, DrSc. dr.h.c  
Rector, BUT

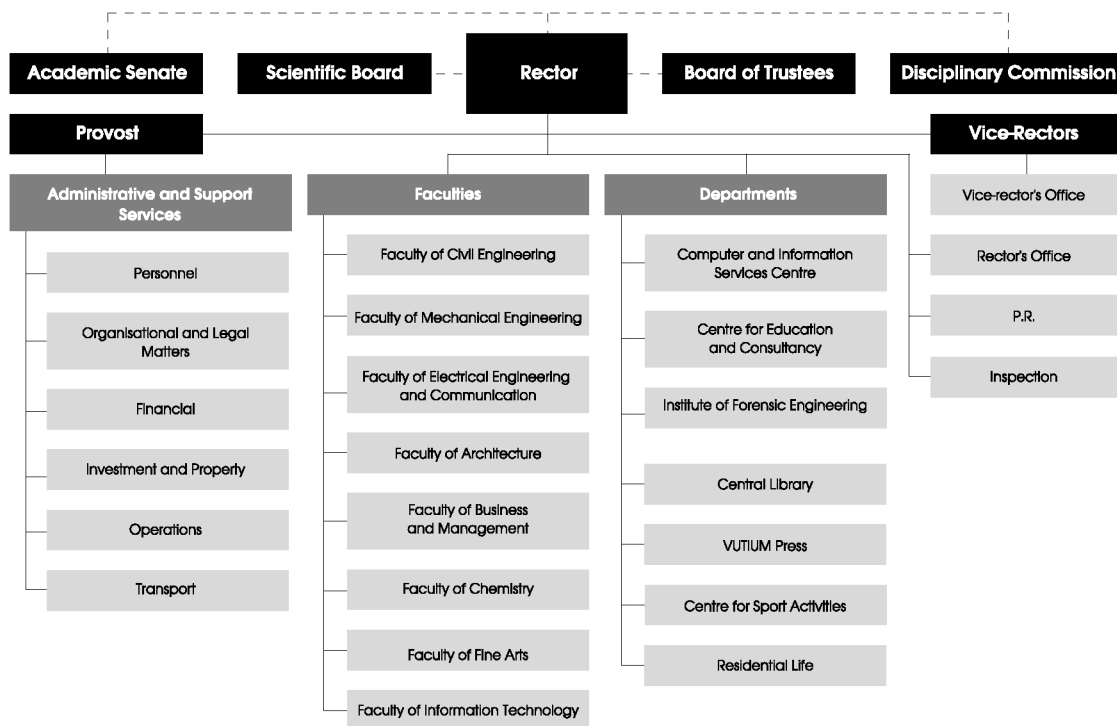


## I BUT SENIOR OFFICERS

8

<b>Rector</b>	Prof. RNDr. Ing. Jan Vrbka, DrSc.
<b>Vice-Rectors</b>	Doc. RNDr. Miloslav Švec, Csc. in charge of education and student affairs Prof. RNDr. Josef Jančář, Csc. in charge of creative activities Prof. Ing. Jiří Kazelle, Csc. in charge of external relations Doc. Ing. Karel Rais, Csc., MBA in charge of strategic development
<b>Bursar</b>	Ing. Jaromír Pěňčík
<b>Chancellor</b>	PhDr. Jiřka Vanýšková

## II ORGANISATIONAL STRUCTURE OF BUT



### III COMPOSITION OF BUT BODIES

9

BUT's governing academic bodies include the Academic Senate, Rector and the Scientific Board. Its other bodies are the Board of Trustees and Bursar.

For an overview of BUT's governing bodies, see Tables III 1 – 3.

### IV EDUCATION

#### Study programmes

A total of 48 Bachelor's, Master's and doctoral degree programmes comprising 136 areas of study were accredited at eight faculties of BUT in 2003, ranging from traditional engineering and new interdisciplinary courses that combine engineering disciplines with natural sciences or economics to architecture and visual arts (see Tabs IV - 1a, 1b).

During the year, new structured study programmes were successfully accredited at the Faculty of Civil Engineering. This completed the restructuring of study programmes at BUT. New study programmes were successfully accredited also at the Faculty of Mechanical Engineering and the Faculty of Business and Management. Study programmes at the Faculty of Civil Engineering, Faculty of Mechanical Engineering, Faculty of Chemistry and Faculty of Fine Arts were re-accredited, or the existing accreditations were extended.

The preparation of new study programmes and improvements in the quality of the educational process were supported by projects of the Transformation and Development Programmes of the Ministry of Education (Tab. IV - 7) and projects of the Higher Education Development Fund (Tab. IV - 8).

All faculties of Brno University of Technology used an ECTS compatible credit system.

#### Students

Of the total of 17,561 students enrolled at BUT as of 31 October 2003, 4,847 were enrolled in Bachelor's degree programmes, 9,240 in Master's degree programmes, 1,601 in follow-up Master's degree programmes and 1,873 in doctoral degree programmes (Tabs IV 2a, 2b, 2c, 2d). The total enrolment at BUT in 2002 was 15,740 students.

The drop-out rate (Tabs IV 3a, 3b) is largely influenced by students who abandoned their studies after the first year. It is traditionally the highest for technical programmes, and is due to the demands posed by the study, the structure of the applicants, and insufficient attention paid at secondary schools to physics and mathematics, i.e. the disciplines that constitute a necessary basis for a successful study of technical fields at the university. BUT has uniform Study and Exam Regulations which, together with directives issued by deans of individual faculties, provide for a continuous control over students' results, mainly by setting out criteria for the number of credits they must get in individual semesters and years. The non-fulfilment of the criteria is a reason for the termination of the study.

Numbers of graduates are given in Tabs IV 4a, 4b, 4c and 4d. A favourable trend is the growing number of graduates of doctoral degree programmes at most BUT faculties.

Data on scholarships granted will be completed after the Financial Section of the Annual Report is prepared, and the financial statements are verified by an auditor.

An overview of Rector's Prizes and other awards is in Tab. IV - 9.

## **Admissions**

A total of 15,356 applications for admission to BUT were submitted in 2003. The total number of those admitted was 8,073, of which 6,551 enrolled (Tabs IV - 5a, 5b). A total of 867 of applicants not admitted requested that their cases be reviewed. Deans of the respective faculties reversed their decisions in 81 cases, mostly because some study places had become available, and the rejected applicants were admitted. The greatest number of appeals was submitted at the Faculty of Business and Management.

The interest in study and the quality of the applicants differed from faculty to faculty. In 2003, the Faculty of Civil Engineering, Faculty of Mechanical Engineering, Faculty of Electrical Engineering and Telecommunications and Faculty of Information Technology were in the greatest demand. Interest in economic and management courses is also traditionally very high. Although the numbers of students enrolled in technical disciplines has increased, the interest in the study of technical disciplines still does not really match their importance and the need for young experts with this kind of training. The number of grammar school graduates among applicants for the study of technical discipline increased slightly (of 11,086 applicants for study at the FCE, FME, FEEC, FC and FIT, grammar school graduates accounted for 33.5%, graduates of secondary vocational schools for 39.6%, and graduates of other types of schools for 26.9%). An increase was also recorded in the number of applicants from among graduates from schools whose education programmes are not primarily geared towards preparing for the study at the university. All BUT faculties consistently make a great deal of effort to recruit the brightest students. Among the most significant activities towards this goal were Open Door Days of BUT faculties and the BUT presence at GAUDEAMUS, the higher education exhibition. Visits of teachers and students from individual faculties to secondary schools are also very effective.

## **Student creative activity**

An important area, and one traditionally supported at BUT, are creative endeavours of Bachelor's and Master's degree students and particularly the doctoral students. Student conferences and competitions of various forms take place at all of BUT faculties. These activities are described in detail in the reports by individual faculties.

## **Student appraisal**

Anonymous questionnaires and the information system were used for various types of surveys in which students were asked to evaluate their curricula and teachers at all BUT faculties. When organizing and evaluating the surveys, the faculty managements collaborated with student organizations. At faculties with a prominent artistic dimension and individual approach to study and students (FA and FFA), students evaluate their teachers mainly by deciding whose classes they want to attend. This approach provides very good feedback.

## **Life-long learning**

In addition to accredited study programmes, BUT also offers programmes of life-long learning. Professional focus courses are intended mainly for BUT graduates. A number of special-interest courses are offered by the University of the Third Age.

The overall volume of life-long learning at BUT in 2003 was 10,094 lessons taught in 119 courses and programmes of life-long learning attended by a total of 3,189 students (see Tab. IV 6).

### **Programmes of study organized in venues other than the public university**

The Faculty of Mechanical Engineering of BUT organizes three combined Bachelor's degree programmes. Classes are given at the Higher Vocational and Secondary Technical School at Žďár nad Sázavou (Engineering Technology) and at the Secondary Vocational School and Secondary Technical Training centre in Uherský Brod (Engineering Technology and Applied Information Science and Control).

As part of its development project, BUT is preparing to launch two Joint Degrees study programmes.

### **University of the Third Age**

The BUT University of the Third Age ("U3A") entered into its fourth year in 2003. In 2003, the first 108 students of the 3rd year completed their studies at University of the Third Age in 8 specialized courses of a discipline-based programme of study.

In the first and the second year of the basic course (141 and 142 students respectively), one lecture per week for a period of 26 weeks is given. Because of the number of students in the third year of study (49), two specialized courses were offered (Current TV Technology and History and Theory of Graphic Art) and the students were expected to take a very active role. The interest in complementary courses in computer use necessitates the opening of six parallel courses per semester, with a total number of 172 students. The fourth-year courses for selected students opened for the first time in 2003 and are attended by 83 students.

Collaboration with other cities and countries developed successfully. "The Internet in Practice", a video-conference between senior citizens attending computer courses and students of computer courses at the Faculty of Electrical Engineering of Czech Technical University was held in the presence of the international project EuCoNet coordinator. In February, the 2nd strategic meeting of seniors from the Socrates Grundtvig 2 project, the European Competence Network for making the Internet accessible to senior citizens, was held at BUT.

Third-year students collaborating in the EuCoNet project took part in the 3rd and 4th strategic meetings of senior citizens in Vincenza and Glasgow in 2003.

In 2003, BUT hosted the secretariat of the Association of Universities of the Third Age. Besides two meetings of the board of the Association of U3A, the General Assembly of the Association of Universities of the Third Age took place at BUT on 13 November 2003. Detailed information on the activities of the Association of Universities of the Third Age can be found at <http://www.vutbr.cz/AU3V>.

## **V SCIENTIFIC AND CREATIVE ACTIVITIES (RESEARCH AND DEVELOPMENT)**

In 2003, scientific and creative activities at the BUT academic faculty intensified, and doctoral students became more involved in these activities. Positive developments in institutionally financed research led to the gradual stabilization of new research teams within the Centre programme and Long-term semester research programmes. Of particular note is that the average age of the scientific workers on these teams is about 32. Creative activities at BUT were in evidence in many areas in natural sciences, technical sciences and engineering, as well as in economics and the fine arts. This diversity is a basis of the newly-forming interdisciplinary creative activities. As in the previous years, funding for the research and

creative activities of the BUT Brno faculty in 2003 came from three sources. The first source was institutional funding provided largely by programmes for the support of science and research in higher education by the Ministry of Education. Twenty long-term research projects were carried out in all at BUT in 2003 (see Tabs V – 3 and V - 10) and the university hosted one Centre and took part in two additional Centres with the Czech Technical University in Prague (see Tab. V – 4). Another important component of institutional research funding at BUT is specific research at schools of higher education pursuant to Act 130/2002 Sb. The second source of research funding at BUT was specific research funding for projects undertaken within the framework of the grant system, which included not only projects funded by the Grant Agency of the CR but also those funded by various ministries, especially the Ministry of Industry and Trade, Ministry of Transport and Communications, Ministry of Culture and Ministry of Foreign Affairs. BUT has a long-standing record in this area as one of the most successful institutions of higher education, with nationally an above average share of accepted applications. The third source of funding derives from contracts with both Czech and foreign industrial enterprises for applied research projects.

In 2003, the funding of creative activities from institutional sources reached 199 million CZK in total. The total amount of funding for scientific and creative activities at BUT from all the three sources was in excess of 340 million CZK, which represents almost 20% of the school's total budget. Like any other dynamic institution, and despite the growth achieved, BUT has to compare its results with competing universities, in particular the Czech Technical University (ČVUT) and Masaryk University. In this context, we achieved a rate of growth comparable with the other institutions.

The number of grant projects at BUT and the total amounts of funding obtained in grant competition in support of specific research are shown in Tabs V - 1, V - 2, V – 8 a–c and V - 10. Compared with 2002, the number of projects was up by 33%, and total funding by 3.55 %. It should be stressed that there are big differences between the individual faculties due to their different sizes, as well as major differences in the structure of funding sources, in the average size of grants and, above all, in the different proportions of involvement of research staff who are authors of the grant projects. In this respect, the situation at the Faculty of Mechanical Engineering ought to be mentioned, as FME has the broadest base of project authors. A significant positive change occurred at the Faculty of Chemistry where the number of successful grant applicants has grown, and where young scientists and doctoral students became more successful in winning funding for research projects. Compared with other Czech universities, the highest proportion of funding for applied research at BUT came from ministerial grant agencies, particular from programmes of the Ministry of Industry and Trade. This fact testifies to an intensifying effort to apply findings from basic research in industrial practice. As in previous years, BUT was most successful in obtaining grants from the grant agencies of MoIT and MoTC. The FME, FCE, FEEC and FC were the most successful.

In an effort to further improve the transfer of results of the research and creative activities into industrial practice, the technology transfer department was reorganized. In 2003, the activities of the consortium Regional Contact Organization (RCO) for the South Moravia region (together with BIC Brno and CheposBio Brno) were fully deployed. A number of events took place to inform and provide consultancy, a database of entities was compiled and an inventory of research facilities that BUT can offer to industrial companies in the region was taken. In 2003, BUT hosted another project extending the activities of the RCO. Under the new project, BUT collaborates with new partners, namely the Transportation Research Centre and the South Moravian Innovation Centre.

Another significant achievement of BUT in supporting the transfer of new technologies and innovative undertakings was the start-up of activities of an incubator of innovative undertakings. As a major driving force in this respect, BUT also became involved in the preparatory work for the implementation of the regional innovation strategy leading to the establishment of a South Moravian Innovation Centre (JIC) with whom BUT concluded an agreement for the administration of BUT's Technological Incubator.

Also important were BUT's activities designed to support students' ventures into new technologies with a particular emphasis on e-business. Together with First Tuesday, RCO BUT organized another in the series of "First Tuesday Academic" meetings, in which over 300 students from BUT and other Brno universities shared in their experience with financiers and successful businessmen to learn from their experience.

The 2003 meeting was the third in succession. Regarding technology transfer, BUT has become a leading force in innovative business in the region, and in the future will be able to provide assistance to Masaryk University and other universities in South Moravia in commercial utilization of their research.

Publication activities of BUT faculty are documented in Tab. V - 9.

Relatively little information and very few documents are available on engineering and artistic projects. Measures will have to be taken in this area in order to objectively evaluate the benefits of engineering works, and to enable at least a partial classification of creative activities.

For more information, please see Tabs V - 5-7.

## VI INFORMATION COMMUNICATION TECHNOLOGY

In 2003, a new information system for economic management and administration of BUT called SAP was built. The basis of a new centralized information system, ApolloVUT for the staff and StudisVUT for students, was established, and a new web portal (PortálVUT) was created.

### **BUT network infrastructure**

Gigabit backbone network

The throughput and reliability of the network were further enhanced in 2003.

The basis of the backbone network was the 2 Gb/s circuit comprising Antonínská 1 – Technická 2 – Purkyňova 118 – Božetěchova 2 – Antonínská 1.

The primary connection to CESNET2 was upgraded to 2 Gb/s (to the Technická 2 node), and the back-up connection was upgraded to 1 Gb/s (to the Antonínská 1 node). The back-up connection is a part of mutual back-ups between BUT and Masaryk University BAPS.

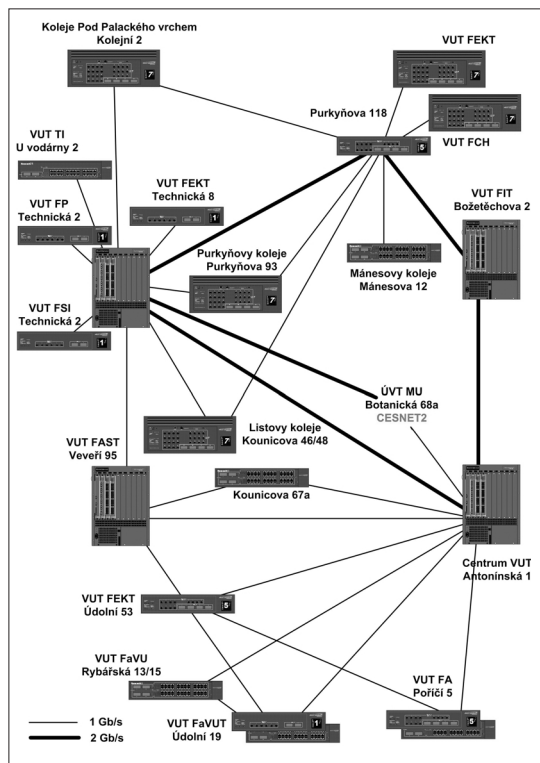
The capacity of switches in selected locations was increased, and missing back-up Gigabit circuits added (BUT dormitories at Kolejní 2, Kounicova 46/48 and Purkyňova 93).

Conditions were created for the experimental operation of new protocols (IPv6) and an increased mobility of users by the development of an additional Wi-Fi network.

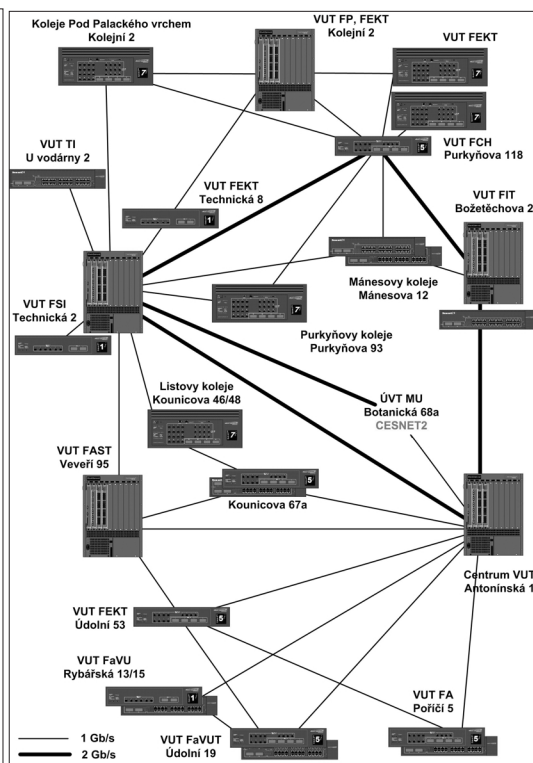
Servers used for network security and basic network services (central firewalls of BUT network, monitoring, DNS, email, ...) were upgraded.

The status of BUT's backbone network at the end of 2003, and development plans for 2004 are illustrated below.

2003 network development plans



2004 network development plans



L3 switches Extreme Networks (Inferno chip set, and Triumph from 2003 onwards), were selected as active elements of the backbone network that meet throughput and basic network security requirements. This selection is in agreement with the concept of BUT backbone network development defined in 1999 and implemented over a period of several years (see Tab. VI – 2).

At the beginning of 2003, BUT's computer network was connected to the CESNET2 national network for science and research at 2 Gb/s, with the back-bone connection operating at 1 Gb/s. In order to ensure BUT network safety, the route between connection points and CESNET2 contains 3 one-gigabit interface firewalls that can simultaneously detect attacks (IDS system), and perform export NetFlow statistics, which then handle the entire incoming and outgoing traffic for the BUT computer network.

### Wireless computer network

A wireless computer network using Wi-Fi technology was built at BUT in 2003. CVIS covered the building of the Rector's office, and added access points for certain faculties for basic verification of the feasibility of operation, and started the extension of coverage. The wireless network is administered and further developed at the faculty level in the same way as the local networks.

### **Building the optical cable route infrastructure in 2003**

New optocable routes completed in 2003 were primarily intended to meet the circuit redundancy requirements, and to provide sufficient number of bundles between locations. Some of the works were commenced in 2002:

The initial part of the route between Veveří 95 and Žižkova 22 (connection between buildings B and D at Veveří 95), and a cunnette was put in in a part of the Antonínská 1 – Botanická 68a – Palackého 1/3 – Božetěchova 2 route.

These works were completed in 2003. A list of newly built optocable routes and their parameters is shown in Tab. VI – 3.

In 2004, work is expected to commence on the following routes:

- Botanická 68a – Kounicova 46/48 (List Dormitory) – Kounicova 67a, and
- Purkyňova 93 (Purkyně Dormitory) –Hradecká/Královopolská crossroads.

New network nodes are to be connected: the newly built integrated building (FBM and part of the FEEC), and the A06 node at the head office of Dormitories and Refectories administration at Kolejní 2.

### **BUT telephone network**

In 2003, the BUT telephone exchange was upgraded to support IP telephony that provides the possibility of telephone terminals in locations outside the reach of the telecommunication network, and calling the BUT network through IP was successfully tested.

The GSM gates to Oscar, The-Mobile and Eurotel mobile services operators were operated successfully. Telephone calls are directed to the GSM networks automatically, and charged for at rates standardly used for calls made within the network of the individual operators.

In 2003, the Cesnet VoicelP service with the 0\*8 prefix was used successfully for making phone calls over the Internet. Thanks to this service, calls to many Czech universities were free, and calls to remote fixed line telephone nodes were made at the price of local calls. Inexpensive calls to other countries are planned for 2004.

### **BUT information system and software**

ApolloVUT is a new three-tier application interface for information systems serving particularly demanding BUT information system users. In 2003, Apollo was applied in the following modules:

- Students' personal files
- Students' study records
- Changes in the status of study and, consequently, of matriculation
- Admission proceedings, including its constituent parts, and standardization of electronic applications
- Study programmes and areas of study
- Subjects
- Study plans

The SAP-based scholarship registration system was prepared to be implemented in 2004 together with a system for simple input of scientific and research publications. In addition, the faculty tier of the all-school system was prepared in 2003 and implemented at FC, and gradually introduced also at FCE and FA. It is mainly used for administrative purposes related to enrolment, time tables, classes, exams, etc.



### **BUT web portal**

In 2003, the BUT web portal (PortálVUT) was completely reworked. Background facilities for a cluster of servers were built. They can handle any number of requests for service from students logging at critical peak times, i.e., when they are registering for university-wide courses. The performance of the system was put to an excellent test during the registration for sports in 2003.

In terms of structure, the portal was divided into 4 main information channels: information on BUT, study portal, science and research portal and information portal. The study portal presents information regarding study at BUT in a uniform format. The data source for the service is the central attendance system (Apollo) and information systems of individual faculties.

Newly introduced BUT log-ins and passwords serving as the sole all-school access codes are used for the intranet portal of BUT. The intranet PortálVUT system enables every BUT staff member to administer personal data and contacts, and to keep track of phone calls. The PortálVUT enables authorized users to publish news, papers and any other information without the webmaster's involvement.

### **Economic and management information system – SAP**

In 2003, the SAP system was successfully prepared, commissioned and put into operation, replacing the original economic management system EkonFIS. Numerous BUT specialists took part in this extensive and important project concerning the entire school. All of the available SAP modules were implemented:

- Financial accounting – FI
- Controlling – CO
- Asset management – AM / IM
- Management of materials and purchasing – MM
- Sales – SD
- Project management - PS
- Human resources – HR PD
- Payroll – HR PA
- System base - BC

Attention was also paid to the integration of SAP, i.e. its linking to the other existing systems: study system personal data administration, scholarships, electronic applications, dormitory assignments, etc. In 2004, SAP is to be integrated into the passports system, student fees and system of projects as part of systems for research and development.

A joint SAP Competence Centre will be created at BUT for BUT users in collaboration with some other schools. The Competence Centre will provide support to the system by organizing a help-desk and providing for the system development.

Introduction of a new assets and room registration system using bar codes is being planned for 2004. The new system will make effective stock-taking possible.

### **The Brutis web interface**

The Brutis web interface using Mambo technology is maintained and developed by an external company in cooperation with the staff of Computer Information and Services Centre (CISC) and Faculty of Electrical Engineering and Communication (FEEC). This technology was used for research and development administration in 2003. This received further support. In the years to come, it will be used for:

The FEEC information system  
 Fast prototyping of new products  
 The transfer of data to the centre in the XML format from satellite data warehouses of some faculties  
 For communication with external entities in the XML format

## VII LIBRARY AND INFORMATION SERVICES

In 2003, BUT library infrastructure development focused on user facilities improvements in the following areas:

- Increasing the seating capacity in study rooms
- Equipping libraries with technical facilities for the reception of electronic information, and supplementing information sources, i.e.,
- Continuing to subscribe to foreign periodicals,
- Acquiring printed publications for library holdings,
- Providing on-line access to electronic versions of serials through consortiums,
- Providing information databases in support of research activities. A part of the databases are summaries of papers, the libraries provide full-text versions, either as copies of the papers, or through the traditional interlibrary loan service.

In light of developments in library services and changes in the format, dissemination and use of information provided, training courses in library and information skills of BUT libraries patrons were held. BUT library staff have been organizing courses and practical training sessions for first-year students from all of BUT faculties since the 1995/1996 academic year to give them basic orientation in this area.

Further events aimed at acquisition of literary searches and research skills are organized on request.

### Library premises

The most significant building project of 2003 was the completion of the reconstruction of the historical campus of the Faculty of Civil Engineering. The project included a significant enlargement of the Library Information Centre, and in terms of its seating capacity in proportion to the number of students at the faculty, it is now comparable to the foremost foreign libraries. Following up on the Rector's decision to move faculties in the following year, a plan for an enlargement of the library infrastructure in 2004-2006 was prepared and presented to BUT library board, in harmony with the creation of user access points for automatic cataloguing of documents.

### Library system

In the academic year of 2003 – 2004, the Aleph library system was introduced in most of the BUT libraries. After a thorough training and thanks to new processing equipment, the Aleph system is now responsible for performing all basic library operations. FIT and FCE libraries will join the Aleph system in 2004, whereby all BUT libraries will work in a single environment.

### Electronic information sources

2003 was the last year of five-year Ministry of Education (MoE) projects in support of on-line access to electronic information sources (EIZ). In mid 2003, however, work was commenced on a follow-up programme that will make the continuation of the projects possible. Several stages of preparatory work preceded the launch of the projects:

- evaluation of utilization statistics,
- definition or redefinition theme selection priorities.

In addition to the consortium activities regarding online access, access to information databases organized by BUT and shared within the school's computer network, continued to be provided.

Successfully concluded negotiations regarding the so-called e-books is one more step towards the introduction of new format to traditional materials in libraries and information centres at BUT. Starting from 2004, BUT will provide general access to e-publications in the area of information technology.

For more information, please see Tabs VII – 1–4.

## VIII PUBLISHING AND EDITING

In 2003, the university published 265 titles. Faculties published conference proceedings, study, teaching and promotional materials. VUTIUM Press edited and published monographs, scientific publications, textbooks, manuals, school magazine, special-occasion prints and translations for the broadest academic community, in both traditional and electronic formats. VUTIUM Press uses the electronic format to publish a series of habilitation and inauguration lectures, summaries of doctoral theses, and to regularly send out BUT News (Události na VUT) magazine.

VUTIUM Press presented the overall production of BUT at international book fairs in Frankfurt (Germany) and in Bratislava (Slovakia) as part of the Czech exhibitions there. The VUTIUM Press organized another joint exhibition of 14 universities and schools of higher education at the Prague book fair. For Brno universities and the BCES, it prepared a joint presentation at the 1st book fair in Brno, where it also organized a seminar on "Opportunities for university publishing houses in the European book space" with presentations by L. Kundera, E. Ondráček and A. Erdziaková.

For more information, please see the Departments of BUT chapter and Tabs VIII – 1-2

## IX ACADEMIC STAFF

The qualification structure of BUT's staff by faculties and institutes is shown in Tabs IX – 1a, 1b, average number of staff by faculties and in Table and Graph IX – 2.

Age structure of BUT teaching and research staff at individual faculties according to position is shown in Tab. IX – 3.

- **BUT's participation in EU programmes of education and vocational training**

- **Socrates/Erasmus – second stage of the programme for 2000/2006**

**Student and teacher mobility** are among the decentralized activities (managed by the National Socrates/Erasmus Agency in Prague). Trips are in principle financed from two sources: about 1/5 of the total amount from EU funds, and the balance is from the Ministry of Education budget. Contributions to study stays were divided into three categories depending on the cost of living in individual countries, ranging from 410 EURO to 470 EURO per month, with the maximum average grant amount remaining at the same level, i.e. 450 EURO per month throughout the year. The contributions to a one-week stay for teachers averaged 480 EURO. Compared with the previous academic year, the number of students and teachers travelling abroad increased (see Tab. X – 2). Additional costs, if any, are borne by BUT.

The average length of a student's stay at a foreign university in the 2002/2003 academic years was 6.4 months, with the average contribution of 2,599 EURO. The average length of stay of teachers at a foreign university in the 2002/2003 academic years was 9.8 days, with the average contribution to 479 EURO.

Individual faculties play an important role in foreign trips taken by teachers. In the 2002/2003 academic year, contributions made by faculties towards teacher mobility amounted to almost 21,000 EURO.

For a summary review of foreign trips, see Tab. X - 3.

**Preparatory visits:** 5 preparatory visits took place (see Tab. X – 4), where 3 bilateral agreements were executed.

**Monitoring visits:** 4 visits took place under the new bilateral agreements (see Tab. X – 4) to present FEEC and BUT, get information on the conditions of study at 5 partner universities, and make personal contacts with teachers and international department staffs.

**Language courses** under the Socrates/Erasmus programme: a course of the Czech language for foreign students coming to BUT was held in the winter and summer semesters. The course material had been developed by the Institute of Social Sciences of the FCE. Further, a one-week intensive course of the Czech language for foreign students was held prior to the start of the summer and winter semesters, with the specialist assistance from the Brno English Centre. The courses were financed by the EU.

**Audit** of the Socrates/Erasmus programme by the National Agency (NA) in April. The NA Socrates/Erasmus representatives visited the BUT to make an in-depth audit of student and teacher mobility in 2001/2002, and to analyze the financial management of the programme. The outcome of the audit was highly favourable in all areas audited. For details, see the official audit report.

**EU programmes** with the exception of the Socrates/Erasmus programme are not centrally managed at BUT. They include Leonardo da Vinci, CEEPUS, AKTION, Socrates/Grundtvig, and other programmes. Individual applicants may participate in the programmes. Basic information on the programmes and guidelines to persons wishing to take part in the programmes are provided by the Department of External Relations.

- **International mobility of students and academic staff:** The international mobility of students and academic personnel is directed and organized to see that the greatest possible number of students spend part of their studies at some partner university abroad (see Tables X -3, X -4). Information about foreign studies is provided and distributed at group meetings with students at the faculties, and general meetings open to all students at the Rector's Office. Information on the BUT web pages is continually updated. An increase of 50% in the number of students travelling on the program Socrates/Erasmus is evidence of these efforts' effectiveness. A term abroad is of undisputed benefit to the personal and professional development of every student; positive evaluations by students who have taken part in the

programme reflect this. All student reports are posted on the BUT website. Foreign trips by instructors are also highly rated, and meet the goals set out for them. However, foreign stays by students and academic personnel are subject to some problems.

Among the most significant factors limiting student mobility are:

- Non-uniform recognition of grades received abroad at individual faculties
- Differing lengths of semester and the academic year among partner universities
- Insufficient availability of courses in English at some partner universities
- Insufficient language abilities and initiative in preparation for studies abroad on the part of the students of some departments

The mobility of teachers is limited by the difficulty in obtaining additional funding from faculties to finance the more expensive stays, which can make it much more difficult for some instructors to make the trip.

• **Inter-university cooperation:** in 2003, BUT sought to make new inter-university framework agreements. Four new framework agreements were executed, and another nine agreements have been drafted (see Tab. X – 1). The specific type of cooperation formats are set out in bilateral agreements concluded between the faculties involved.

• **Development programmes** of the Ministry of Education: as part of the mobility activities, 48 students travelled abroad in 2003 for a total of 132 months, valued at 1,320 thousand CZK, either under Framework agreements at inter-university level, or as “free movers”. The programmes support students travelling and staying at foreign universities.

• **Cooperation with GREF** (Groupement des Retraités Educateurs sans Frontières) continued in 2003. It again took the form of French language courses taught by native speakers both to BUT students and teachers. The university paid only a part of the lecturers’ cost of accommodation.

• **Cooperation with TU Dresden –Herbert Quandt Foundation:** this active cooperation project with TU Dresden in Germany and with the Herbert Quandt Foundation seated in Bad Homburg has been ongoing for the past five years, offering scholarships for study stays at TU Dresden to students, doctoral students and researches from BUT. Student scholarship is 425 EURO per month for a maximum of 2 years; doctoral students get 625 EURO per month for a maximum period of 1 year, and young researchers under 35 years of age may get scholarships worth 925 EURO for a maximum of 1 year. The Herbert Quandt Foundation also covers travel expenses in full.

In the 2001/2002 and 2002/2003 academic years, two students were selected each year. One student has been taking advantage of the programme in 2003/2004. Following a selection process at BUT, three student applications were submitted for the next academic year. The final decision about the successful recipients rests with the Foundation.

• **Student mobility scholarship fund** was established in 2002 to help increase the number of BUT student mobility projects. The fund supports study stays in countries with exceptionally high Living costs visited under the Socrates/Erasmus programme, as well as student mobility projects outside the programme. The maximum contribution is 8,000 CZK per month, with a maximum of 25,000 CZK for the entire stay. Because of an increase in the number of study stays by students in 2003, a total of 2,400,000 CZK was paid by the Fund. The recipients were 104 students participating in the Socrates/Erasmus programme, and 47 students made the visit outside the programme.

Judging by the experience from the past two years, the fund significantly helps to increase student mobility. Money from the fund was used to support stays abroad within as well as outside the Socrates/Erasmus programme, and contributions were only made to cover higher than-usual living costs. In view of constantly growing number of students travelling, the total amount of the fund is to be increased in 2004,

and the rules governing the use of the fund are to be amended to allow as many students as possible to benefit from the fund.

- **Meetings with students:** In 2003, two meetings with BUT students were organized by the Department of External Relations. In March, a meeting for students interested in studying abroad with a special attention to the Socrates/Erasmus programme was organized. At the December meeting, students were given information on New Zealand, its history, economy and nature, as well as its educational system and study opportunities.

- **EAIA (European Association for International Education) conference and exhibition:** BUT was presented at the Brno universities stand at an exhibition held on the occasion of the 15th EAIA conference that took place from 10 to 13 September 2003 in Vienna. Detailed information on the event was published in no. 10 of the BUT News magazine.

## XI OTHER ACTIVITIES OF BUT

### Brno Centre of European Studies

One of the most important activities of BUT is providing Europe-oriented education, both in setting up the European university education and research space and in preparing for the Czech Republic's entry into the European Union. An important role in the preparation is played by the Brno Centre of European Studies (BCES), which is a European education joint initiative of BUT, some other public universities in Brno, the Military Academy and the Brno Municipality. Established by an association agreement signed by the rectors and the Mayor of the Statutory City of Brno in 2002, the BCSE set up a functional basis and started its activities. The mission of the association is to integrate the professional potential of the Brno universities in European education, to develop and provide education in its own as well as joint programmes of study concerning EU issues, to provide related counselling and information services in a variety of areas related to the process of European integration and accession, and to present joint activities at an international, and in particular European, level.

Prof. RNDr. Ing. Jan Vrbka, DrSc., the Rector of BUT, was elected the first chairman of the BCES executive, and Prof. Ing. Emanuel Ondráček, CSc. was elected the chairman of the BCES board of directors. The BUT Rector's Office, BUT bursar and the Centre for Education and Counselling (CEACO) were appointed coordinators of BCES activities at BUT.

BCES activities at BUT focused on analyzing the situation in European education, and consolidating the existing and developing new educational programmes at BUT.

The following educational activities were undertaken in 2003:

- European Consultant: a pilot course in the life-long education programme
- Project Management and International Project Management: a series of courses from the life-long education programme
- Programme of European Aviation Legislation and Regulations
- Courses in European Aviation Legislation and Regulations for countries of Central and Eastern Europe with international accreditation
- A feasibility study for educational and study programmes with a European dimension at FME (Technical standardization in the EU and implementation of international standards in the Czech Republic), at FCE (Construction Engineering), and at FP and FIT (Joint Degree Programme).

- Access to the grant opportunities portal at <http://www.subvence.cz> for all BCES members
- Building the information and communication portal "European Studies"

In 2003, the Centre for Education and Counselling coordinated the analysis of the existing programmes of European Education at Brno universities, organized the preparation of BCES presentation and the presentation of BUT activities within BCES.

In 2003, a book and CD-ROM was published at BUT with the BCES logo and BCES participation (The Brno Universities), and the VUTIUM Press took part in the national book exhibition The World of Books 2003.

### **Academic gathering**

On the occasion of the anniversary of the founding of the Brno Technical University in 1899, a gathering of representatives of Brno universities and the Ministry of Education of the Czech Republic is held every year. At the Academic gathering held on 18 November, Prof. RNDr. Ing. Jan Vrbka, DrSc., Rector of BUT, awarded Gold Medals of BUT to:

Assoc. Prof. Ing. Eva Münsterová, CSc., for her work for the development of BUT and significant contribution to the development of university education,

Assoc. Prof. Dagmar Glosová, CSc., for her work for the development of BUT and significant contribution to the development of university education,

Prof. Jiří Jan, CSc., for his work for the development of BUT and significant contribution to the development of biomedical engineering.

### **Concerts, exhibitions, lectures, discussions**

Concerts, exhibitions, lectures and discussions on topical social and political issues are organized for the academic community and the broad public by BUT at the BUT Centre, BUT faculties and other important cultural and social centres.

### **BUT Choir**

Cooperation with the BUT choir VOX IUVENALIS continued in 2003. One of the choir's concerts was in celebration its tenth anniversary of its founding and the third anniversary of its existence under the auspices of BUT. In addition to its Christmas, Easter and the "Tongue-in-cheek" concerts for both the academic community and the public, VOX IUVENALIS gave four concerts with foreign choirs at the BUT Centre.

### **University magazine**

Editor-in chief PhDr. Jiřka Vanýšková, Chancellor of BUT, and editor Mgr. Igor Maukš.

BUT News is a monthly description of life at BUT and commenting on topical events both at BUT and outside it.

### **Information brochures**

In 2003, the Brno University of Technology promotional brochure was reprinted, and a new edition of the BUT leaflet in English with information on its individual faculties was published. An updated information brochure for foreign students containing basic information on the Czech Republic and Brno and detailed information on all faculties was also published. BUT participated in the work on The Brno Universities, a book published with the support of the Metropolitan Authority of the Statutory City of Brno and the Brno Centre of European Studies.

### **Student accommodation**

The allocation of dormitory rooms for 2003/2004 was performed from 19th to 21st September 2003. The waiting list had been compiled pursuant to criteria approved by the Rector of BUT.

Students of the 2nd and higher years submitted on-line applications for accommodation and their agreements were also sent in by post. Other students (first year students in particular) concluded the accommodation agreements in the traditional manner.

By 14th October 2003, 97.5% of the accommodation capacity had been taken up.

A part of the accommodation capacity was used by international students and students staying at BUT under the SOKRATES, ERASMUS and CEPUS programmes.

Although BUT had booked 201 beds at the Božetěchova Hotel for its students, it was unable to provide accommodation for all of the applicants on the waiting list (on 8th January 2004, the Dormitories and Refectories Administration registered a total of 1,150 rejected requests for accommodation).

For the academic year 2003/2004, BUT provided 170 beds for students of Masaryk University and 80 beds for students of the University of Veterinary and Pharmaceutical Sciences.

In 2003, 97.7% of the student bed capacity was used.

For details, see Tabs XII – 1 and XII – 4a, b and c..

### **Meals for students**

In 2003, renovation work to bring refectories up to the latest public health standards was completed. At the request of the FC, DaR Administration took over the snack bar at Purkyňova 118 originally operated by a private company. A reconstruction of the premises made it possible to start serving meals also to BUT employees (see Tab. XII – 2).

Variations in the number of meals served over the year as well as over the week are a critical factor for the economic viability of refectories (see Table and Graph XII – 3). For more information, see Tab. XII 4a, b, c).

### **Information services and counselling**

For detailed information, see the Centre for Education and Counselling section in Chapter XVII.

### **Physical education, sports, and artistic and other activities**

For detailed information, see the Centre for Sport Activities section in Chapter XVII.

### **Student Chamber of BUT Academic Senate**

In 2003, the Student Chamber of BUT Academic Senate worked as part of the new structure of BUT student organizations set up 2001. Its chairman was Ing. Jaroslav Švec from the Faculty of Information Technology, and vice-chairman František Dřtil from the Faculty of Electrical Engineering and Communication.

The Student Chamber of BUT Academic Senate is also represented in the Supervisory Board of DaR. Mr. František Dřtil (FEEC) was also in the Student Chamber of the Universities Council.

The assembly of BUT Students held in May served as a venue for a discussion of current student issues.

The Academic Centre of Student Activities (ACSA) organized the 3rd national conference attended by over 100 representatives of universities. The main theme of the conference was the "Role of Students in the Civil Society".

Students also organized a Grad Ball of BUT, Majáles festival, and a number of other events.



### **Academic Centre of Student Activities (ACSA)**

This is a project submitted by the Brno University of Technology and approved and subsidized by the Czech Ministry of Education since 2002. The 2003 subsidy was 800,000 CZK. The project also won a grant from the International Visegrad Fund of a total of 6,000 EURO, and Microsoft s.r.o and GTS International gave the Centre another 20,000 CZK for its activities.

#### **The most important events organized by ACSA in 2003:**

- The 3rd national student conference “Current Role and Position of Students at Universities 2003” on the Role of Students in the Civil Society
- Seminars on university legislation and academic senates for student representatives from Czech schools of higher education
- Organized a 5-day course in project management, and subsequently initiated the establishment of a group of young project managers in the Czech Republic
- Presentation of the Czech Republic at an international conference in Oslo on Student Participation in Governance in Higher Education, and prepared materials on the involvement of students in university governance for the Berlin summit

## **XIII DEVELOPMENT OF BUT**

### **XIII – 1 ASSETS REPRODUCTION FUNDED FROM THE STATE BUDGET**

The following funds from the stat budget were used for the financing of assets reproduction:

#### **Structures – Ministry of Education**

- Individual subsidies 194,500 thousand CZK
- Systemic subsidies 5,000 thousand CZK
- Purpose-specific subsidies 7,440 thousand CZK

#### **Structures – Ministry of Industry and Trade**

- Systemic subsidies 5,960 thousand CZK

#### **Structures – State Environment Fund**

- Systemic subsidies 3,785 thousand CZK

#### **Machines and equipment of not included in investment costs - MoE**

- Systemic subsidies 6,000 thousand CZK
- 6a Programme 16,000 thousand CZK
- Purpose-specific subsidies 75,631 thousand CZK

#### **Other funding for machines and equipment not included in investment costs**

- MoIT 1,800 thousand CZK

### **XIII – 2 OTHER CAPITAL INVESTMENT ACTIVITIES**

Besides funds from the state budget, assets reproduction at BUT was financed from the BUT budget, funds from the grant agency, gifts and subsidies from abroad.

#### **Structures**

- Higher Education Development Fund 103,917 thousand CZK

- A gift of 2,757 thousand CZK

#### **Machines and equipment of not included in investment costs**

- HEDF 51,867 thousand CZK
- Academy of Sciences of the CR 180 thousand CZK
- Grant Agency of the CR 3,206 thousand CZK
- A gift of 516 thousand CZK
- Subsidies from abroad 144 thousand CZK
- Co-beneficiaries 414 thousand CZK

### **XIII – 3 RECONSTRUCTION AND REPAIRS OF BUT BUILDINGS**

Reconstruction and repairs of buildings belonging to BUT were financed from BUT funds and from the state budget (both capital investment and non-investment projects). Some new structures were also built. For an overview of building activities and financing, see Tab. XIII 3 – 7c.

For more detailed information, see Tabs XIII – 3 -1-9.

### **XIII – 4 HIGHER EDUCATION DEVELOPMENT FUND PROGRAMMES AT BUT**

(see Tab. XIII 4 – 1)

### **XIII – 5 BUT INVOLVEMENT IN DEVELOPMENT AND TRANSFORMATION PROGRAMMES FOR PUBLIC SCHOOLS OF HIGHER EDUCATION** (see Tab. IV – 7)

## **XIV OTHER DATA REQUIRED BY THE MANAGEMENT BOARD OF A PUBLIC SCHOOL OF HIGHER EDUCATION**

(pursuant to Section 21 Par. 2d of Act 11/1998 Sb.)

#### **Management board activities**

In 2003, two meetings of the Management Board of BUT were held with the following agenda:

- **11th meeting, 5 May 2003**
  - Election of the chairman and vice chairmen of the Management Board
  - Opinion of the Management Board on 2003 Annual Report on Financial Performance
  - Opinion of the Management Board on the budget for 2003
  - Opinion of the Management Board on the draft update of Long-term Plan for 2004
  - Approval by the Management Board to a transfer of real estate
  - Opinion of the Management Board on the establishment of JIC s.r.o. and InVUT s.r.o. companies
- **12th meeting, 10 November 2003**
  - Report on activities of the Technological Incubator to the Management Board
  - Approval by the Management Board to the granting of an easement
  - Approval by the Management Board to the transfer of real estate

For the list of members of the Management Board, see Table III – 3

## XV CHANGES OF INTERNAL REGULATIONS

For the list of changes of internal regulations that were approved and entered into force in 2003, see Tab. XV – 1.

## XVI ACTIVITIES OF THE FACULTIES AND DEPARTMENTS OF BUT

Information on the activities of the faculties and BUT departments are described in detail on the following pages.

Faculty of Civil Engineering  
Brno University of Technology  
Veveří 331/95, 602 00 Brno  
tel.: +420 541 141 111  
e-mail: [dekan@fce.vutbr.cz](mailto:dekan@fce.vutbr.cz)  
<http://www.fce.vutbr.cz>



# Faculty of Civil Engineering

**Dean:** Prof. RNDr. Ing. Petr Štěpánek, CSc.

**Vice-Deans:** Assoc. Prof. Ing. Vlastimil Stara, CSc.  
Prof. Ing. Jindřich Melcher, DRSc.  
Prof. Ing. Rostislav Drochytka, CSc.

**Secretary:** Ing. Tibor Horoščák, CSc

**Chairman of the Academic Senate:** Assoc. Prof. RNDr. Josef Dalík, CSc.

#### **Faculty institutes**

Institute of Mathematics and Descriptive Geometry  
headed by Prof. RNDr. Josef Diblík, DrSc.

Institute of Physics  
headed by Prof. RNDr. Zdeněk Chobola, CSc.

Institute of Chemistry  
headed by Assoc. Prof. RNDr. Pavla Rovnaníková, CSc.

Institute of Structural Mechanics  
headed by Prof. Ing. Drahomír Novák, DrSc.

Institute of Geodesy  
headed by Assoc. Prof. Ing. Josef Vításek, CSc.

Institute of Geotechnics  
headed by Assoc. Prof. Ing. Kamila Weiglová, CSc.

Institute of Building Construction  
headed by Assoc. Prof. Ing. Milan Vlček, CSc.

Institute of Technology of Building Materials and Components  
headed by Prof. Ing. Rostislav Drochytka, CSc.

Institute of Concrete and Masonry Structures  
headed by Prof. Ing. Jiří Stráský, CSc.

Institute of Highway Construction  
headed by Assoc. Prof. Ing. Jan Kudrna, CSc.

Institute of Railroads and Railroad Structures  
headed by Assoc. Prof. Ing. Pavel Zvěřina, CSc.

Institute of Metal and Timber structures  
headed by Prof. Ing. Jindřich Melcher, DrSc.

Institute of Municipal Water Management  
headed by Ing. Ladislav Tuhovčák, CSc.

Institute of Waterway Structures  
headed by Assoc. Prof. Ing. Vlastimil Stara, CSc.

Institute of Landscape Water Management  
headed by Assoc. Prof. Ing. Miloš Starý, CSc.

Institute of Building Services  
headed by Ing. Jiří Hirš, CSc.

Institute of Computer Aided Engineering

headed by Assoc. Prof.RNDr. Jiří Macur, CSc.  
 Institute of Structural Economics and Management  
 headed by Ing. Leonora Marková, Ph.D.  
 Institute of Technology, Mechanization and Construction Management  
 headed by Mgr. Petr Lízal, CSc.  
 Institute of Construction Testing  
 headed by Prof. Ing. Jiří Adámek, CSc.  
 Institute of Social Sciences,  
 headed by PhDr. Darja Daňková  
 Library and Information Centre  
 headed by Mgr. Marie Davidová  
 Centre for Computation Technology Management  
 headed by Ing. Miloslav Zimmerman

### Education and instruction

On 31st December 2003, a total of 4,364 students were enrolled at the Faculty of Civil Engineering in full-time, combined and doctoral programmes of study, of which 3,446 were full-time students and 325 students attended combined study programmes.

A total of 16 students successfully completed doctoral programmes and were awarded the Ph.D. degree.

All activities in the areas of education and instruction were harmonized with long-term plans of both BUT and the Faculty of Civil Engineering, with the main objectives being:

- To continue to offer all accredited Master's and doctoral programmes in academic years 2002/2003 and 2003/2004.
- To submit an application for an extension of accreditation of the existing Master's and doctoral study programmes of Civil Engineering and Geodesy and Cartography.
- To submit an application to Ministry of Education of the CR for the accreditation of new structured full-time programmes of study, specifically, a 3-year Bachelor's programme in Construction, a 4-year Bachelor's programme in Civil Engineering, a follow-up 1.5-year Master's programme in Civil Engineering, a 3-year Bachelor's programme in Geodesy and Cartography, and a 2-year follow-up Master's programme in Geodesy and Cartography.
- To file an application for the extension of accreditation of the Bachelor's study programme in Geodesy and Cartography to include a new course on Military Geodesy and Cartography.
- To file an application for the extension of accreditation for the Master's study programme of Civil Engineering for the study area of Building Construction given in English as a combined programme of study for students enrolled in the academic year 2004/2005.
- To commence work towards the accreditation of new programmes, as well as currently accredited programmes, to be given in foreign languages and in the combined form of study.
- To complete work on an integrated faculty information system for study modules.

In 2003, 501 students successfully completed their studies in Master's programmes of study, and 16 students completed their doctoral programmes and received the Ph.D degree.

## Research and development activities

Activities in research and development focused on four long-term research plans. Faculty staff take part in seven foreign projects under the 5th framework programmes (e.g. CARE S, CARE W, SQUAREC, Marie Curie Fellowship, INTERACT), one project financed by the Visegrad Fund (Visero), two Leonardo da Vinci projects, two joint Czech and Polish projects, and they collaborate on projects with Norway, Slovenia, Slovakia and Austria.

The Faculty of Civil Engineering organizes 32 projects financed by the Czech Grant Agency, and co-organizes another 9 projects. It is also involved in one project for the Ministry of Transport and Communications, and 4 projects for the Ministry of Industry and Trade.

The Faculty of Civil Engineering staff worked on eight projects for the Higher Education Development Fund and on 2 projects for the Ministry of Education ("Comprehensive Integration of Disabled Students in the Study at BUT" and "Creation and Extension of a Structured Combined Study Programme in Civil Engineering, and Geodesy and Cartography").

## Main areas of research

The main areas of research and development and creative activities are based on long-term concepts of FCE development as formulated in the Mission Statement of the Faculty of Civil Engineering of BUT for 2000 to 2005 and amended in 2003. The plan sets out the following major areas:

- Analysis, methods for designing, verification and identification of structurally and dynamically loaded structures from their life cycle point of view
  - development, assessment, verification and calibration of design methods
  - new utilization of constructions from traditional materials
  - creation and development of auto-adaptive composite constructions
  - deterministic and stochastic modelling of stationary and non-stationary phenomena and processes
- Progressive construction materials employing secondary raw materials
- Reliability and risks analysis of water management systems and structures
  - development of theoretical models, setting up of expert systems
  - drinking water supply, drainage of urbanized areas, analysis of inundation areas, hydrotechnical structures
- Quality improvements in the interior of buildings
- Development of new constructions and building design methods from the point of view of criteria and principles of sustainable development, design optimization
  - Integrated technologies for engineering geodesy and digital mapping
  - Comprehensive and vaguely defined engineering systems (theory, modelling and application of results)
- Development of economic tools for design optimization and construction work

Appointments of new full professors and associate professors

The associate professor degree was conferred to three members of the academic staff.

The full professor degree was conferred to two associate professors.

### **Student research activity**

Student research activity were coordinated by the Student Research Board and liaison workers at FCE departments. A total of 203 projects were submitted in 29 sections at the faculty round of the 2003 competition. In the international round of student research activities in Bratislava, the FCE was represented by 18 projects in 10 sections. FCE students won 3 first places, 5 second places and 1 third place.

### **International relations**

In 2003, FCE followed up on its previous activities and cooperation under bilateral and framework agreements; the number of foreign schools and institutions cooperating with FCE increased to 81.

A total of 462 trips abroad were made including 375 trips with participation congresses, conferences, seminars and symposia and publishing the papers presented there in proceedings. Twenty-eight countries were thus visited.

In 2003, the faculty was visited by a total of 61 teachers, doctoral students and students from abroad. The costs of the visits were mostly paid from research grants and long-term research projects.

### **Building activities and transfers of departments**

In 2003, the reconstruction of building A was completed and the 4th floor was converted into presentation premises. Water management research laboratories were moved from Kníničky, Rekreační 1, to the newly reconstructed building F.

A monitoring system that includes monitoring of energy utilization, security, operation of elevators and camera systems was installed at the Veveří – Žižkova premises.

Work on the Veveří – Žižkova premises reconstruction project was suspended. The installation of new windows in building D was started.

### **Life-long education**

In 2003, an educational system in two basic areas was launched at the Faculty of Civil Engineering:

- accredited programmes of study
- courses for the building practice and for public administration

The latter courses were successfully accredited for the life-long education project of the ČKAIT.

### **Teaching standards appraisal by students**

As in previous years, opinion polls on the “Appraisal of teaching standards by students” were organized on the faculty intranet. Only a minority of students (about 14 %) took part in the appraisal of all the faculty teaching staff.

### **Library and Information Centre**

The Library and Information Centre mission is to provide information support to classes, study, and research and development at the Faculty of Civil Engineering. It provides access to all information resources in response to the needs in both instruction and research and development. The Centre patrons include students and the teaching staff of the Faculty of Civil Engineering, as well as students and staff members of other BUT faculties, other universities, and the general public. The library and information services provided reflect the developments in information technologies and new opportunities from information resources.



Information is provided not only in electronic form but also in printed documents. In 2003, an emphasis was placed on the acquisition of new printed resources and their quality. Electronic information sources were made available through the "LI – Information Sources for Research and Development" project.

The reconstruction of the Centre which included a substantial enlargement of its premises was completed in September 2003. The Centre now consists of three study rooms with free access to printed documents, two computer rooms for access to electronic information, a copy centre and an entrance hall. The scope of the Centre's services includes consultations, reference information, literary searches, copying and lending of books.

The Centre has seating for 290 clients. .

Faculty of Mechanical Engineering  
Brno University of Technology  
Technická 2896/2, 602 00 Brno  
tel.: +420 541 141 111  
email: [mail@fme.vutbr.cz](mailto:mail@fme.vutbr.cz)  
<http://www.fme.vutbr.cz>



**Faculty of Mechanical Engineering**

**Dean:** Prof. Ing. Josef Vačkář, CSc.

**Vice-deans:** Prof. Ing. Jiří Švejcar, CSc.  
 authorized representative of the dean, research and development, doctoral study programmes, economic operations  
 Assoc. Prof. RNDr. Miroslav Doupovec, CSc.  
 first-stage Master's degree courses, admission procedure, Bachelor's degree courses, combined study, attendance records administration  
 Assoc. Prof. Dr. Ing. Radek Knoflíček  
 external relations and promotion, transfer of faculty premises  
 Assoc. Prof. RNDr. Radim Chmelík, Ph.D.  
 second-stage Master's degree courses, publishing, external teachers, life-long education

**Secretary:** Ing. Vladimír Kotek

**Chairman of the Academic Senate:** Dr. Ing. Michal Jaroš

**Chairman of the Scientific Board:** Prof. Ing. Josef Vačkář, CSc.

#### Departments

Institute of Mathematics  
 Director: Prof. RNDr. Josef Šlapal, CSc.  
 Institute of Physical Engineering  
 Director: Prof. RNDr. Miroslav Liška, DrSc.  
 Institute of Mechanics of Solids  
 Director: Assoc. Prof. Ing. Jindřich Petruška, CSc.  
 Institute of Materials Engineering  
 Director: Prof. RNDr. Jaroslav Cihlář, CSc.  
 Institute of Design  
 Director: Assoc. Prof. Ing. Martin Hartl, Ph.D.  
 Institute of Power Engineering  
 Director: Assoc. Prof. Ing. Zdeněk Skála, CSc.  
 Institute of Manufacturing Technology  
 Director: Assoc. Prof. Ing. Miroslav Píška, CSc.  
 Institute of Production Machines, Systems and Robotics  
 Director: Assoc. Prof. Ing. Miloš Hammer, CSc.  
 Institute of Process and Environmental Engineering  
 Director: Prof. Ing. Petr Stehlík, CSc.  
 Institute of Transport Engineering  
 Director: Prof. Ing. Václav Píštěk, DrSc.  
 Institute of Aerospace Engineering  
 Director: Prof. Ing. Antonín Píštěk, CSc.

Institute of Automation and Informatics  
 Director: Assoc. Prof. RNDr. Ing. Miloš Šeda, Dr.  
 Institute of Languages  
 headed by Mgr. Jiřka Kudličková

**The Faculty of Mechanical Engineering offers the following programmes of study:**

Programme of study	Area of study	Type	Degree	Length
Bachelor's degree programme B 2341 Engineering	Mechanical engineering	FT	Bc.	3
	Industrial design in engineering	FT	Bc.	3
	Applied informatics and management	FT,C	Bc.	3
	Process and power engineering	FT	Bc.	3
	Air traffic	FT	Bc.	3
	Materials engineering	FT	Bc.	3
	Construction of machines and equipment	FT,C	Bc.	3
	Manufacturing technology	FT,C	Bc.	3
Bachelor's degree B 3901 Applied sciences in engineering	Physical engineering	FT	Bc.	3
	Mathematical engineering	FT	Bc.	3
	Mechatronics	FT	Bc.	3
Follow-up Master's degree programme N 3901 Applied sciences in engineering	Physical engineering	FT	Ing.	2
	Informatics and automation in engineering	FT	Ing.	2
	Mechanics in engineering	FT	Ing.	2
	Mathematics engineering	FT	Ing.	2
	Materials engineering	FT	Ing.	2
	Mechatronics	FT	Ing.	2
	Industrial design in engineering	FT	Ing.	2
	Mechanics of precision and optics	FT	Ing.	2
	Quality assurance	FT	Ing.	2
Programme of study	Areas of study	Type	Degree	Length
Follow-up Master's degree programme N 2301 Mechanical engineering	Transport and handling equipment	FT	Ing.	2
	Power engineering	FT	Ing.	2
	Fluid engineering	FT	Ing.	2
	Construction and process engineering	FT	Ing.	2
	Aircraft	FT	Ing.	2
	Casting technologies	FT	Ing.	2
	Construction of manufact. machines and equip.	FT	Ing.	2
	Machining technology	FT	Ing.	2
	Engin. technology and industrial management	FT	Ing.	2
	Machines for building industry, upgrading and agriculture	FT	Ing.	2
	Technology for the environment	FT	Ing.	2

Follow-up Master's degree programme N 2301 Mechanical engineering	Applied informatics and management	FT,C	Ing.	3
	Construction of machines and equipment	FT,C	Ing.	3
	Manufacturing technol. and industr. management	FT,C	Ing.	3
Doctoral degree P 2302 Machines and equipment	Construction and process engineering	FT,C	Ph.D.	3
Doctoral degree P 2303 Manufacturing technology	Manufacturing technology	FT,C	Ph.D.	3
Doctoral degree P 3910 Physical and materials engineering	Physical and materials engineering	FT,C	Ph.D.	3
Doctoral degree P 3901 Applied sciences in engineering	Mechanics in engineering	FT,C	Ph.D.	3
Doctoral degree P 3913 Application of natural sciences	Mathematical engineering	FT,C	Ph.D.	3
Doctoral degree P 3917 Forensic engineering	Forensic engineering	FT,C	Ph.D.	3
Doctoral degree P 3920 Metrology and testing	Metrology and testing	FT,C	Ph.D.	3

*FT = full-time study; C=combined study*

## Main features of study at the Faculty of Mechanical Engineering

### Structured programmes of study

Structured university study is based on the existence of study programmes at three levels, i.e. Bachelor's, follow-up Master's and doctoral degree programmes.

**Entrance examinations** to the first year of the Bachelor's programme consist of a written examination in mathematics and physics. The examination is waived where the applicant took the school-leaving examination in mathematics or physics and got an A or B in at least one of the two.

**Bachelor's programmes** in "Mechanical Engineering" and "Applied Sciences in Engineering"

The study is completed by a final state examination that includes the defence of the student's thesis. A Bachelor's degree (Bc.) is conferred on successful graduates. These study programmes are divided into vocational and general courses.

**Vocational courses** have a practical focus and are intended mainly for students who intend to seek employment after graduation. The graduates may, however, continue their studies in a follow-up three-year Master's degree programme (where they have a choice of three different courses) and obtain the Master's degree ("Ing."). Vocational courses leading to the Bachelor's degree are Applied Informatics and Control, Process and Power Engineering, Air traffic, Materials Engineering, Construction of Machines and Equipment, and Engineering Technology. All of the first year students in vocational courses attend the same subjects. Students in the first year of study may transfer between the two types of courses.

**General courses** are suitable for applicants who wish to pursue an academic career immediately after graduation to get the Master's degree ("Ing."). Graduates of general Bachelor's degree courses at the FME will on request be enrolled (without having to sit for entrance examinations) in a two-year follow-up Master's degree programme (offering a choice of about 20 areas of study). The list of general areas of study in the two-year Bachelor's degree programme include Mechanical Engineering, Industrial Design in

Engineering, Physical Engineering, Mathematical Engineering, and Mechatronics. The first year students of Mechanical Engineering and Industrial Design in Engineering attend the same courses, and students interested in pursuing a career in industrial design prove their talents by taking an examination some time in the first year of study. Those who pass may go on to study Industrial Design in Engineering. Those who do not may transfer to the Mechanical Engineering programme. Mathematical Engineering, Physical Engineering and Mechatronics study areas are separate from the first year onwards.

**Two-year follow-up Master's programmes in Applied Sciences in Engineering and Mechanical Engineering** are intended for graduates of general Bachelor's degree courses who intend to pursue an academic career to the Master's degree. Applicants have the choice of about 20 courses.

**The three-year follow-up Master's degree programme in Mechanical Engineering** is intended for vocational Bachelor's degree courses graduates (both from the FME and technical faculties of other universities) who intend to continue their studies to obtain the Master's degree. Applicants have the choice of three courses.

**The combined form of study** is a combination of full-time programmes with distance courses at the ratio of 1:2. The full-time part of the programme (one third) takes the form of seminars and controlled consultations held once a week in one of the consultation centres (in Brno at the FME, in Žďár nad Sázavou and in Uherský Brod). The distance part of the study is controlled work on home assignments. A list of courses and locations where the combined form of study will be offered in the academic years of 2004/2005 will be published at the faculty's Internet pages and in the Dean's decree on the admission procedure.

### **The greatest achievement in 2003**

The successful restructuring of Bachelor's and Master's degree programmes of study.

### **The most important research result**

The Faculty of Mechanical Engineering is a faculty with many research laboratories engaged in both basic and applied research. In 2003, the faculty staff worked on a total of 120 projects with the overall budget approaching 165 million CZK.

### **Student competitions**

A research competition for Ph.D. students at FME was held in 2003. A total of sixty-two doctoral students submitted their works.

### **The appraisal of quality of teaching by students**

Every year, an anonymous opinion poll is organized by the faculty management where students are invited to give their opinions on professional abilities and skills of their teachers. They can also give their opinions on any issue of interest and concern to them. The opinion poll was conducted in an approved manner, and the faculty management responds to every comment on the faculty website.

### **Preparation and accreditation of new programmes**

The transition to structured university study necessitated the restructuring of Bachelor's and follow-up Master's degree programmes. In 2003, the following accreditation proceedings took place:

- Extension of accreditation for the five-year study programme Mechanical Engineering, and

two-year follow-up Master's degree programmes in Mechanical Engineering and Applied Sciences in Engineering.

- Extension of accreditation for the Bachelor's degree programme in Applied Sciences in Engineering to include areas of study Mechatronics and Materials Engineering
- Extension of accreditation for the Bachelor's degree programme in Engineering to include Mechanical Engineering, Industrial Design in Engineering and Technical Applied Ecology.
- Extension of accreditation for the three-year follow-up Master's degree programme in Mechanical Engineering to include Applied Informatics and Management, Construction of Machines and Equipment and Production Technologies and Industrial Management.

### **Development and transformation programmes**

Work continued on the Combined Bachelor's Degree Programme in Engineering project undertaken in cooperation with regional higher vocational schools, and on the project Development of a New Area of Study in Mechatronics in the vocationally slanted Bachelor's Degree Programme in Engineering. New projects were successfully introduced. They included projects The Development of a New Course in Technical Applied Ecology in the vocationally slanted Bachelor's programme in Engineering, the Development of Higher Education in the Region in Cooperation with Higher Vocational Schools, and the Creation of Study Support for Distance Type of Study.

### **Reconstructions**

In 2003, several important reconstruction projects were undertaken, e.g.:

- The building of a wheelchair access to the A1 highrise
- Reconstruction of toilettes in the A4 building
- Reconstruction and modernization of P3 and P6 lecture rooms

Modernization of lecture rooms at the Institute of Automation and Informatics

Faculty of Electrical Engineering and Communication  
Brno University of Technology  
Údolní 224/53, 602 00 Brno  
tel.: +420 541 141 111  
e-mail: [info@feec.vutbr.cz](mailto:info@feec.vutbr.cz)  
<http://www.vutbr.cz>



# Faculty of Electrical Engineering and Communication



**Dean:** Prof. Ing. Radimír Vrba, CSc.

**Vice-Deans:** Assoc. Prof. Ing. Pavel Jura, CSc.  
 Deputy Dean, Vice-Dean for Master's degree programmes,  
 Assoc. Prof. Ing. Jarmila Dědková, CSc.  
 Teaching and Bachelor's degree programmes  
 Prof. Dr. Ing. Zbyněk Raida  
 Creative activities and doctoral studies  
 Assoc. Prof. Ing. Ivo Provazník, Ph.D.  
 External and international relations

**Chairman of Academic Senate:** RNDr. Vlasta Krupková, CSc.

**Secretary:** Ing. Miloslav Morda

#### **Institutes**

Institute of Control, Measurement, and Instrumentation  
 headed by Prof. Ing. Petr Vavřín, DrSc.  
 Institute of Biomedical Engineering  
 headed by Prof. Ing. Jiří Jan, CSc.  
 Institute of Power Engineering  
 headed by Assoc. Prof. Ing. Antonín Matoušek, CSc.  
 Institute of Electrical and Electronic Technology  
 headed by Assoc. Prof. Ing. Josef Jiráček, CSc.  
 Institute of Physics:  
 headed by Assoc. Prof. Ing. Lubomír Grmela, CSc.  
 Institute of Languages  
 headed by PhDr. Milena Krhutová, Ph.D.  
 Institute of Mathematics  
 headed by Prof. RNDr. Jan Chvalina, DrSc.  
 Institute of Microelectronics  
 headed by Prof. Ing. Vladislav Musil, CSc.  
 Institute of Radioelectronics  
 headed by Prof. Ing. Jiří Svačina, CSc.  
 Institute of Theoretical and Experimental Electrical Engineering  
 headed by Assoc. Prof. Ing. Milan Murina, CSc.  
 headed by Ing. Pavel Fiala, Ph.D. (from 1. 9. 2003)  
 Institute of Telecommunications  
 headed by Prof. Ing. Kamil Vrba, CSc.  
 Institute of Electrical Machines and Devices  
 headed by Assoc. Prof. Ing. Čestmír Ondrůšek, CSc.

**The faculty offers the following accredited study programmes:**

• **Bachelor's degree programmes in Electrical Engineering, Electronics, and Communication and Control in the following fields of study** (from academic year 2002/03):

Automation and Measurement  
Electronics and Communication  
Microelectronics and Technology  
Heavy-Current and Power Engineering  
Teleinformatics

• **Master's degree programmes in Electrical Engineering, Electronics, and Communication and Control in the following fields** (from academic year 2006/07):

Biomedical and Environmental Engineering  
Electronics and Radio Communication  
Power Engineering  
Production and Management in Electrical Engineering  
Cybernetics, Automation, and Measurement  
Microelectronics  
Heavy-Current and Power Engineering  
Telecommunication and Information Technology

• **Doctoral programmes in Electrical Engineering, Electronics, and Communication and Control** (from academic year 2002/03):

Electronics and Communication  
Microelectronics and Technology  
Biomedical Electronics and Power Engineering  
Heavy-Current and Power Engineering  
Teleinformatics  
Cybernetics, Automation, and Measurement  
Theoretical Electrical Engineering

**The faculty still conducts the following programmes slated to be phased out:**

Bachelor's degree programme in Electrical Engineering and Informatics  
Master's degree programme in Electrical Engineering and Informatics  
follow-up Master's programme in Electrical Engineering and Informatics

Within a chosen field of studies, Biomedical Engineering or Biomedical Electronics can be studied in special courses.

In 2003, a total of 9 Bachelor's degree students, 288 engineers in the Master's programme, and 23 doctoral students successfully completed their studies at FEEC. 1107 new students entered first-year studies. Doctoral studies were started by 81 new candidates. In 2003 more than 34 foreign students studied at the FEEC in English language courses.

**Newly appointed professors and associate professors**

Two associate professors and one professor were appointed to the faculty in 2003.

### Major events

Among the major events at the faculty in 2003 were the following:

- awarding of the BUT Gold Medal to Prof. Ing. Jiří Jan, CSc. Director of the Institute for Biomedical Engineering
- the awarding and successful implementation of an extensive Ministry of Education development and transformation programme focusing on combined and distance studies
- victory by the Orpheus rescue robot team behind Assoc. Prof. Ing. František Solc, CSc., and Ing. Luďek Žalud, Ph.D. at the 2003 Robocup World Championship in Padua, Italy, in the Rescue Robot League
- the awarding of a large number of Higher Education Development Fund projects bringing with them significant financial resources in all academic areas
- participation by FEEC at the university trade fairs GAUDEAMUS 2003 and ELEKTRA BRNO 2003
- the faculty and international rounds of STUDENT EEICT 2003, a conference for creative student activities, with heavy participation by students and doctoral candidates, and a high standard of presentation
- construction of an integrated building for the FEEC and FBM in the area Pod Palackého vrchem
- the traditional grand ball of the Faculty of Electrical Engineering and Communication and the Faculty of Information Technology, held at the BUT Centre

### Most important research findings

Under the leadership of Assoc. Prof. Ing. Miroslav Kasal, CSc. at the FEEC Institute of Radioelectronics, the development was completed of a station for the collection of telemetric data for the satellite AMSAT-OSCAR 40 under the international project PHASE 3D. The equipment consists of an antennae system for automatic tracking of the satellite, a set of receivers and transmitters, low-static amplifiers, (wave) converters, power amplifiers, modems, and guidance units.

### Faculty development

The faculty's development strategy in 2003 was shaped by the mid-term prospect of moving. The goal for 2003 was to undertake the necessary changes and improvements to the Technická B area. The institutes located at the Udolní site were scheduled to be moved to the Integrated Building in 2004. Halfway through the year the faculty decided to contribute to a solution to the BUT's space problems, therefore the institutes of Electrotechnology and Microelectronics will continue to be located in Udolní. As much room as possible was made in the budget for the changes scheduled for 2004.

Funds for the purchase of equipment (Ministry of Education programme 333 328) were used to modernize the classrooms at Technická 8. At a cost of 1.5 mil. CZK, each classroom was equipped with a compact system with a unified control system.

### Development programmes

In addition to a number of projects sponsored by the CR Grant Agency and the Higher Education Development Fund, the faculty was also awarded a Ministry of Education development programme for electronic teaching support. The goal of this project is to gradually build the infrastructure and support for distance forms of study in the individual FEEC programmes. Under the programme more than 62 titles in electronic text form were produced, with a total volume of 6,500 pages, as well as 36 virtual lab exercises.

**Student competition**

The Faculty of Electrical Engineering and Communication and the Faculty of Information Technology jointly organized a faculty and international round of the 9th annual student conference STUDENT EEICT 2003. The conference was an opportunity to present the work of students and doctoral candidates, and a chance to strengthen ties between the faculties and their industrial partners among firms in the electro-technical field. The diamond sponsor in 2003 was the Honeywell company; other significant sponsors were ŠKODA Auto a.s., AMIS, MOTOROLA, SIEMENS, ON Semiconductor Czech, H-TEST a. s., FOXCONN CZ, CELESTICA, and others.

# Faculty of Architecture



Faculty of Architecture  
Brno University of Technology  
Poříčí 237/5, 639 00 Brno  
tel.: +420 541 146 600, fax: +420 541 146 605  
e-mail: [jmeno@fa.vutbr.cz](mailto:jmeno@fa.vutbr.cz)  
<http://www.fa.vutbr.cz>

**Dean:** Assoc. Prof. Ing. Josef Chybík, CSc.

**Vice-Deans:** Ing. arch. Hana Ryšavá, CSc.  
 Deputy Dean, external relations  
 Assoc. Prof. Ing. arch. Dagmar Glosová, CSc.  
 Education, to 31.1.2003  
 Ing. arch. Iva Poslušná Ph.D.  
 Education, from 1.2.2003  
 Ing. arch. Josef Hrabec, CSc.  
 Creative activities and admissions  
 Akademický sochař Oldřich Rujbr  
 Development

**Secretary:** Ing. Jan Krnáč

**Chairman of Academic Senate:** Ing. arch. Jiří Knesl

#### **Institutes and studios**

Institute of Drawing and Modelling  
 headed by Assoc. Prof. Ing. arch. Zdeněk Makovský  
 Institute for Free Creative Activity  
 headed by Akad. sochař Oldřich Rujbr  
 Institute of the Theory of Architecture  
 headed by Ing. arch. Karel Doležel, to 31.8.2003  
 headed by Ing. arch. Jan Hrubý, CSc., from 1.9.2003  
 Institute of the Theory of Town Planning  
 headed by doc. Ing. arch. Jan Koutný, CSc.  
 Institute of Building Structure  
 headed by Prof. Ing. Jiří Vaverka, DrSc., to 31.7.2003  
 headed by Assoc. Prof. Ing. Miloslav Meixner, CSc, from 1.8.2003  
 Institute of Construction  
 headed by Ing. Petr Kostihá  
 Studio of Living Environment  
 headed by Assoc. Prof. Ing. arch. Dagmar Glosová, CSc.  
 Studio of Public Construction  
 headed by Ing. arch. Hana Ryšavá, CSc.  
 Studio of Manufacturing Construction  
 headed by Prof. Ing. arch. Alois Nový, CSc.  
 Studio of Monument Reconstruction  
 headed by Prof. Ing. arch. Helena Zemánková, CSc.  
 Studio of Urban Design  
 headed by Ing. arch. Karel Havliš  
 Studio of Interiors and Exhibitions  
 headed by: Prof. Ing. arch. Jiljí Šindlar, CSc.

Computer Centre  
headed by Assoc. Prof. Ing. Jan Viktorin, CSc.

### **The Faculty of Architecture provides courses in the following programmes**

Bachelor's degree programme:  
35-01-7 Architecture and Town Planning  
Master's degree programme:  
35-01-8 Architecture and Town Planning  
Doctoral programme:  
35-01-9 Architecture  
35-02-9 Town Planning

### **Major events**

The most important achievement of the faculty in 2003 was probably the successful participation of students and teachers in domestic and international competitions and exhibitions.

The research project "Czech architecture and town-planning in the new situation" was extended. Two grants provided by the CR Grant Agency are being implemented. At the same time a number of tasks were drawn up and are part of project Higher Education Development Fund.

Accreditation was extended for accreditation to name professors in the field of town planning.

Professor Ing. Arch. Ivan Ruller was recognized for his life's work. On recommendation from the Dean of the FA BUT, Ruller was awarded the "For Service" medal by President of the Czech Republic Václav Klaus.

On recommendation of the Dean of the FA, Brno University of Technology Rector Jan Vrbka awarded the BUT Gold Medal to Professor Assoc. Prof. Ing. Arch. Dagmar Glossová, CSc. for her lifelong service.

Two new professors were named: Prof. Ing. Arch. Alois Nový, CSc., and Prof. Ing. Arch. Jiljí Šindlar, CSc. Two new assistant professors were also named: Assoc. Prof. Ing. Miloslav Meixner, CSc. and Assoc. Prof. Ing. Arch. Vladimíra Šilhánková, PhD.

### **Important research findings**

Among the most important research findings of 2003 was the successful research project MSM 264100016 – "Czech architecture and town planning in the new situation". The work on this project involved a wide spectrum of the faculty's staff. This project has become one of the central vehicles for the development of research at the faculty. Due to success it was extended for the year 2004.

2003 saw the continuation of CR Grant Agency project 103/02/1375/A "Situation and prospects for factory areas of industrial towns in the Czech Republic", led by Prof. Ing. Arch. Alois Nový, CSc. The project underwent partial review, on which basis it was decided to continue with the project.

The GA CR accepted new project no. 103/03/0222 "Building Housing for Seniors", to be led by Assoc. Prof. Ing. Arch. Dagmar Glossová, CSc.

### **Results of creative activities**

A number of exhibitions were held in 2003 at which the results of the faculty's creative activities were presented.

Another important event was the exhibition of diploma work. Because two classes completed their studies in 2003, two exhibits were held, both at the Brno Architecture Gallery. The diploma work finished during the winter semester was also displayed at the Czech Centre at the Embassy of the Czech Republic in Stockholm. A bilingual Czech-English edition of the papers was published.

Another exhibit of diploma work was organized by the Studio of the Living Environment – Retirement Home in Brno-Komín. The FA organized a conference on the subject of housing for seniors. The Studio of Living Environment also organized an exhibit of work by second-year Master's degree students - Náměstí míru, Masarykova Quarter, Brno, which was held at spaces provided by the City of Brno. At the Free Time Centre in Brno – Kohoutovice, an exhibit on the future of Kohoutovice Square was organized by the Studio of Living Environment.

The BUT Centre and the Faculty of Architecture hosted the exhibit "The future of Brno's brownfields II", organized by the Studio of Manufacturing Construction. Conservation and renovation of the industrial heritage and its return to useful service is the subject of the book "Creating within the Existing", by Ing. Arch. Helena Zemánková, CSc.

Other creative activities included a project by a team of academics and students in the revitalization of industrial zones in Nîmes, France. At an international competition to find a new use for the site "Lavoir Montcear", Prof. Ing. Arch. Helena Zemánková, CSc. led the team to the second round, in the company of teams from the Netherlands, France, Germany, Belgium, and the CR.

The exhibit FIGURAMA of students' work has achieved an important status in the field. The collection of paintings and drawings by students from five art schools (the University of the Industrial Arts in Prague, the University of Applied Arts in Vienna, Fachhochschule Mainz, and the faculties of Fine Arts and Architecture of the BUT) was held in the Sala Terrena at the Heiligenkreuz Hof in Vienna. Simultaneously with the exhibit FIGURAMA, an exhibit entitled Artillerie was held at the Czech Centre in Vienna, presenting works by the teachers of these schools. Among them: Assoc. Prof. Ing. Arch. Zdeňek Makovský, academic painter Karel Pokorný, and Ing. Arch. Aleš Navrátil, Ph.D. The exhibit was officially opened by Jiří Grůša, Ambassador of the CR to Austria. The FIGURAMA 2003 exhibit was also shown in Znojmo, Brno, and Prague.

A number of international workshops also took place, for example, "Toulcovy maštele", in the village of Proseč in the Czech-Moravian Highlands, organized by the Studio of Manufacturing Construction, and including students from Kaiserslauten and Bratislava.

A Workshop with exhibition was also held at Castle Cimburk; the organizer was Ing. Arch. Josef Hrabec, CSc. of the Studio of Monument Reconstruction.

The FA also put on the event "Brno Town Planning Days", under the subtitle "Focus on your City", from 26.2 to 2.4.2003, organized by the Studio of Town Planning, and led by Ing. Arch. Petr Hurník, who succeeded in bringing in a number of extraordinary personalities and topics. Professor Milan Knížák spoke on the town as an artefact; architect Jana Husárová of the renewal of the main square in Bratislava; Professor Jan Sokol lectured on the fortified town; and architect Zdeňek Lukeš held forth on the problems of Prague's city squares.

The traditional Vllth Academic Doctoral Conference was held, with a briefing book containing 23 contributions.

### **Student competitions**

The quality of teaching can also be judged by results achieved by students of the faculty in various competitions.



Under a programme of the Ecole d' Architecture de Nancy, led by that school's instructors Thibault Babler and Michael Halter, FA students Tomáš Pína and Chinese student Han Wei took part in the 8th annual BMW Foundation International Student Architecture Competition. There were 200 entries in the contest. Competing with architecture schools from all of France, the work of Pína and his colleague won first prize. For this international success, student Tomáš Pína was awarded the BUT Rector's Prize.

At the prestigious 8th annual Hebel 2003 student competition, devoted to the renewal of villages along the Elbe River, Hana Vojtová won first prize from among 54 entries. The work was overseen by Ing. Arch. Vítězslav Nový; second prize was won by Petr Martinka, under the guidance of Ing. Arch. Hana Ryšová, CSc. and Ing. Arch. Radek Suchánek.

The annual "Review of Diploma Work" sponsored by the Czech Chamber of Architects featured work from all five Czech schools of architecture. Out of 47 projects submitted, that of Lukrecia Richterová won second prize for her work "A Regional Museum of 20th-Century Moravian Architecture". The work was guided by Prof. Ing. Arch. Miroslav Masák, Acad. Arch. Ladislav Kuba, and Ing. Arch. Ludvík Grym.

Aleš Motyčka won second prize in a competition in Forbach, France, for a project to reclaim a coal processing area. French student Aurelien Raveneau also placed in the same competition; he spent the summer semester at the FA BUT under the Erasmus programme. Both students were guided by Prof. Ing. Arch. Helena Zemánková, CSc. The competition presented 32 projects from France, Luxembourg, Austria, and the Czech Republic.

For the 10th annual diploma work competition in the field of creation and protection of environmental habitat, sponsored by the Enviopitum Foundation in Brno and the Ministry of the Environment, 45 projects were entered from 23 Czech institutes of higher education. In the category of technical sciences, diploma work by Jitka Blahořovská entitled The Energy Park was awarded first prize. The project was led by Ing. Arch. Hana Urbášková, PhD.

In the competition "Inspiration 2003" under the MOBITEK international trade fair, student Michal Štourač won a prize in the category of design for his shelf system "Silver Pyramid". The work was guided by Prof. Ing. Arch. Jiljí Šindlar, CSc. Competing were students from secondary and higher institutions with art programmes from throughout the Czech and Slovak Republics.

At the 6th annual student contest for the best town planning project, out of 26 entries by architecture students from the CVUT Prague, the UT in Liberec, STU in Bratislava, and the BUT in Brno, students Pavel Stojanov and Karel Kloupar of BUT won second place, and Marta Balážiková placed third.

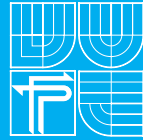
## Reconstruction

Building B of the FA BUT underwent reconstruction during 2003. Reconstruction finished with work on the above-ground parts of the site at Poříčí 5 and moving of the institute located there.

The work improved conditions for the Institute of Building Structure, which acquired the area where the Model Centre is now located.

A new computer network was installed, and the Computer Centre was expanded; students may take advantage of the facility 24 hours a day.

Faculty of Business and Management  
Brno University of Technology  
Technická 2896/2, 616 69 Brno  
tel.: +420 541 141 111  
e-mail: [dean@fbm.vutbr.cz](mailto:dean@fbm.vutbr.cz), e-mail: [jmeno@fbm.vutbr.cz](mailto:jmeno@fbm.vutbr.cz)  
<http://intra.fbm.vutbr.cz>, <http://www.fbm.vutbr.cz>



**Faculty of Business and Management**

<b>Dean:</b>	Assoc. Prof. Ing. Miloš Koch, CSc.
<b>Dean's advisor:</b>	Assoc. Prof. Ing. Karel Rais, CSc., MBA Economic affairs
<b>Vice-Deans:</b>	Assoc. Prof. Ing. Vojtěch Koráb, Dr., MBA Deputy Dean, Science and research Prof. RNDr. Ivan Mezník, CSc. Development Assoc. Prof. Ing. Mária Režňáková, CSc. Teaching Assoc. Prof. Ing. Vladimír Chalupský, CSc., MBA International relations
<b>Secretary:</b>	Ing. Václav Meluzín
<b>Chairman of Academic Senate:</b>	Ing. Viktor Ondrák, Ph.D.
<b>Chairman of Research Council:</b>	Assoc. Prof. Ing. Miloš Koch, CSc.

#### **Institutions**

Institute of Applied Disciplines  
Ing. Jiří Kříž, Ph.D., Director  
Institute for Economics and Management  
Ing. Alena Kocmanová, Ph.D., Director  
Institute of Postgraduate Studies - Brno Business School  
Ing. Oldřich Šašinka, MBA, Director

#### **The faculty offers the following programmes:**

- **Bachelor's degree programme:** Economics and Management  
– field of studies Tax Consultancy  
Systems Engineering and Information Technology  
– field of studies Managerial Information Technology
- **Master's programme follow-up:** Economics and Management  
– field of studies Enterprise Finance and Trade  
and Enterprise Management and Economics
- **Doctoral programme:** Economics and Management  
– field of studies Enterprise Management and Economics

### **Main features of study programmes**

The faculty has accreditation for its Economics and Management programmes, and the Bachelor's degree programme "Systems Engineering and Information Technology". Graduates of secondary school may enrol in the Bachelor's degree programme "Tax Consultancy", providing education in the field of tax and accounting, as well as in the programme "Managerial Information Technology" in the area of information systems and information technology. Graduates of an economically-focused programme may continue on to the Master's degree programmes Enterprise Finance and Trade, aimed at education qualified specialists in the areas of finance and trade. Graduates of technically-based study Bachelor's programmes may apply to continue in the Master's programme Enterprise Management and Economics, intended to educate qualified specialists in the economics and management of both small and large firms. Promising Master's degree graduates may apply for the doctoral programme "Enterprise Management and Economics", intended to produce elite management personnel and research economists.

### **Lifelong education**

Under its lifelong education programme, the faculty provides a British Bachelor's degree programme in "Business Management and Finance", offered in cooperation with Nottingham Trent University in Great Britain. It is intended for secondary school graduates and others with secondary school equivalence. The Institute for Postgraduate Studies – Brno Business School provides courses and lifelong education courses in Economics, Management, and Marketing. Its backbone programme is the Master's of Business Administration programme, conducted in cooperation with Nottingham Trent University in Great Britain. Other MBA courses were started in cooperation with Dominican University, Chicago, USA. Together with Copernicus University in Poland, the faculty organizes an international management-marketing study for top management personnel.

### **Most important research findings**

The quality of results of academic and research work at the faculty resulted in it earning a grant under the 5th EU framework programme "METASEP" to be directed by Assoc. Prof. Ing. M. Dohnal, DrSc. The results of the project will be used to prepare a project for the 6th EU FP. The internationalization of both the research institutes continued with "New trends in the development of machine and electrotechnical enterprises, with focus on the South Moravia region" (Prof. Ing. P. Němeček, DrSc.) and "Research on Strategic Management in Czech Firms" (Assoc. Prof. Ing. M. Keřkovský, CSc.). Two grants from the CR Grant Agency were also obtained.

### **Greatest success of 2003**

In September the faculty organized its eleventh international academic conference. Among the participants was European Commission representative Mr. Laurie Walker, who spoke at the plenary session on the Czech Republic's entry into the EU.

### **Student evaluations of teaching**

A Programme Council serves at the faculty to deal with problems encountered and submit proposals for solutions to the Dean and the Academic Senate. Twice a year the Senate undertakes an anonymous survey of students. The results are posted on the Senate website, and serve as a basis for evaluating the quality of teaching and teachers.

### **Preparation and accreditation of new programmes**

The faculty prepared for accreditation the new inter-faculty Bachelor's degree programme Applied Science in Engineering, field of studies "Production Process Management".

### **Development and transformation programmes**

The faculty won three projects offered by the Higher Education Development Fund under the "Project for Support of Selected Programmes" for the preparation of accreditation in new areas of studies.

### **New staff appointments**

Two new associate professors were appointed to the faculty. Two candidates entered the appointment procedure. Three academic personnel of the FBM successfully defended their doctoral thesis.

### **International contacts**

Nine bilateral agreements were signed last year with universities abroad. Beginning with this academic year, 50 students each year will have the chance to participate in an exchange programme under the programme Socrates/Erasmus.

### **Student competitions**

At the 9th annual international competition "Euroweek 2003" organized by the PRIME association of Portugal, a three-student team (Š. Pastorová, P. Meležínek and P. Palečková) won 3rd place for the preparation, presentation, and defence of their project "Knowledge Management in the Production Company".

### **Conference activities**

- 1st international joint conference between the BUT and the University of Seville "Research in Business".
- 5th international conference "MEB Management, Economics, Business".
- 5th international conference "Business Development and the European Community".
- 6th international conference "The Decidable and the Undecidable in Mathematics Education" ("Small and medium firm management with computer support").
- 7th international conference "Small and medium firm management with computer support".
- 11th international conference "Business and Development in Central and Eastern Europe in the period of joining to the European Union ("Transformace ekonomik zemí střední a východní Evropy").
- International conference on research grants, organized under the institutional long-term research project "New trends in development of machine and electrotechnical enterprises in the South Moravia region".
- Conference organized under CR Grant Agency research grant "Environmental management"
- International doctoral conference
- Doctoral conference "Benefits of academic disciplines for economic development.
- Open House Day. Fifth FBM student ball. Faculty participation in the Gaudeamus exhibition of universities for secondary school graduates.

During the year, selected academic personnel lectured at European partner universities as teachers, and at international conferences.

**Faculty development**

During the past year the building of the FBM on the BUT grounds "Pod Palackého vrchem" has undergone construction. The work is on schedule, and the final inspection of the building is planned for May 2004. The faculty will move during the summer, and instruction will begin in the new spaces in the fall semester of academic year 2004/2005.

# Faculty of Chemistry



Faculty of Chemistry  
Brno University of Technology  
Purkyňova 464/118, 612 00 Brno  
tel.: +420 541 149 301, fax: +420 541 211 697  
e-mail: [dean@fch.vutbr.cz](mailto:dean@fch.vutbr.cz)  
<http://www.fch.vutbr.cz>

**Dean:** Prof. Ing. Jaroslav FIALA, CSc.

**Vice-Deans:** Prof. Ing. Ladislav OMELKA, DrSc.  
 Deputy Dean; Creative activities, external relations  
 Assoc. Prof. Ing. Oldřich ZMEŠKAL, CSc.  
 Teaching  
 RNDr. Ivana MÁROVÁ, CSc.  
 External relations  
 Assoc. Prof. Ing. Michal VESELÝ, CSc.  
 Development and faculty activities

**Secretary:** Ing. Renata HERRMANNOVÁ

**Chairman of the Academic Senate:** RNDr. Božena KÁBELOVÁ

#### **Institutes**

Institute of Physical and Consumer Chemistry  
 Director: Assoc. Prof. Ing. Miloslav PEKAŘ, CSc.  
 Institute of Chemistry and Technology of Environmental Protection  
 Director: Assoc. Prof. Ing. Ivan MAŠEK, CSc. (to 30.9.2003)  
 Prof. RNDr. Milada VÁVROVÁ, CSc. (from 1.10.2003)  
 Institute of Material Chemistry  
 Director: Prof. RNDr. Josef JANČÁŘ, CSc. (to 30.9.2003)  
 Assoc. Prof. RNDr. Vladimír ČECH, PhD. (from 1.10.2003)  
 Institute of Chemistry of Foodstuffs and Biotechnology  
 Director: Assoc. Prof. Ing. Miroslav FIŠERA, CSc.

#### **Main features of study at the faculty:**

- choice of specialization not required at outset of studies,
- credit system, and consequent possibility of interdisciplinary studies,
- wide range of study fields,
- structure and concept of study fields on the basis of the requirements of practice, both in regard to current conditions, as well as future developments in technical practice
- follow-up Master's degree programme available,
- extensive computer support for all study programmes,
- EUR ING degree option available

Both full-time and combined courses are offered for all programmes. The combined courses combine work on home assignments with attendance at lectures (one full day per week, one laboratory practice week per semester).



### Study programmes offered by the FC in academic year 2002/2003

PROG	Study programmes	Study fields
<b>• Bachelor's degree (standard period of studies 3 years):</b>		
B2801	Chemistry and Chemical Technology	Technical Chemistry
B2901	Chemistry and Technology of Foodstuffs	Chemistry of Foodstuffs
B2901	Chemistry and technology of foodstuffs	Biotechnology
<b>• Master's studies follow-up (standard period of studies 2 years):</b>		
N2805	Chemistry and Technology of Environmental Protection	Chemistry and Technology of Environmental Protection
N2806	Consumer Chemistry	Consumer Chemistry
N2808	Chemistry and Material Technology	Material Chemistry
N2901	Chemistry and Technology of Foodstuffs	Chemistry of Foodstuffs and Biotechnology
<b>• Master's studies (standard period of studies 5 years):</b>		
M2805	Chemistry and Technology of Environmental Protection	Chemistry and Technology of Environmental Protection
M2806	Consumer Chemistry	Consumer Chemistry
M2808	Chemistry and Technology of Materials	Material Chemistry
M2901	Chemistry and Technology of Foodstuffs	Chemistry of Foodstuffs and Biotechnology
<b>• Doktorat (standard period of studies 3 years):</b>		
P1404	Physical chemistry	Physical Chemistry
P1405	Macromolecular chemistry	Macromolecular chemistry
P2805	Chem. and Technol. of Environmental Protection	Chemistry of the Environment
P3911	Material Sciences	Material Chemistry

### Newly appointed professors

The faculty appointed one new associate professor and one professor in 2003.

### Doctoral studies

Fifteen students successfully defended their dissertation thesis at the FCH in 2003.

### Summary of major events

In May 2003 the 2nd annual workshop "Bringing universities into the process of preparing and

realizing concepts in crisis management and the protection of the population". It was attended by a number of experts from universities, governmental and administrative bodies, and local towns and villages.

Other annual events conducted by the FCH were the three-day seminar "Elemental trace analysis focusing on problems of determining As, Se, Sb, and Mo in the environment by the ETA-AAS method, and introduction to the technique of microwave disintegration", held in November, 2003.

### **Most important research findings**

The research efforts of the faculty are focused on solving the problems of research and other projects funded by the grant agencies. At present there are two long-term research projects underway, of which one has been given the highest evaluation, the only BUT project to be so recognized. In 2003 the Faculty of Chemistry was also implementing 7 Czech Republic Grant Agency projects (3 POST-DOC, one doctorate, 3 standard projects), 1 project under LI, 4 projects under the KONTAKT programme, 1 development project, 2 projects from COST, 1 project under 5.RP, and 19 projects under the Higher Education Development Fund.

### **Student evaluations of teaching**

At the end of each semester, the faculty conducts a survey of student opinion on the quality of teaching. In 2003 a new questionnaire in electronic form was developed, in consultation with experts and student representatives. Now students can fill them out at the same time as their tests. The results of the survey are summarized and presented on the FCH web pages. The survey results are a useful resource for managing the teaching process at the level of the faculty and the individual institutions.

### **Student competition**

The faculty devotes much attention to organizing student activities in the field. In 2003 the tradition of competition in research activities was continued. In June there was a contest for students of Bachelor's and Master's degree programmes STUDENT FCH 2003; in September there was a contest for doctorate students, including submission of a full text and presentation in an international language. Both conferences issued a compilation of the contributions.

In response to an invitation by the organizers, in October several Bachelor's and Master's degree students took part in an international competition of student research activity in Bratislava. That the faculty was well represented is witnessed by the fact that two FCH students won second place, and two won third place. Several faculty students took part in another competition ("Prix de Chemie", "Agrofert Holding" – 3rd place in category of dissertation work).

### **Preparation and accreditation of new study programmes**

In response to high and growing demand for studies in foodstuff chemistry, and in accordance with the Long-term plan for education and research, artistic and other creative activity at Brno University of Technology for the period 1999-2005, the FCH has been accredited in, and is now conducting, a Bachelor's degree programme in Chemistry and Foodstuff Technology, both as a main study area, and in combined form with Chemistry of Foodstuffs and Biotechnology.

To increase international-language instruction, the accreditation committee was presented with a request for accreditation of parallel doctoral studies in Physical Chemistry (study field Physical Chemistry),

Macromolecular Chemistry (the study of Macromolecular Chemistry), and Material Sciences (the study of Material Chemistry) in the English language. Also prepared for accreditation is a parallel English-language Bachelor's programme Technical Chemistry.

The accreditation commission also received a request for the extension of accreditation for all four existing continuing Master's studies programmes.

### **Development and transformation programmes**

In 2003 the Faculty of Chemistry worked on the development project for implementing an interdisciplinary Bachelor's degree programme "Crisis management and population protection". At present the basic documentation has been prepared and materials are being assembled for a request for accreditation of this Bachelor's degree programme. In the fall of 2003 a request was submitted for an extension of the development project for 2004.

The FCH also took part in implementing the all-university development programme for handicapped students.

In fall 2003 three new proposals were submitted for transformation and development projects for the gradual introduction of structured studies, and the introduction of study programmes in English, as well as on development of lifelong education.

### **Reconstruction and building of laboratories**

In 2003 two modernized faculty computer classrooms were built, with a total of 50 PCs. The computers are in operation 14 hours a day, and monitored with a camera system. Two new data projectors were installed in two faculty lecture halls (P2, P6).

Under the Institute for Material Chemistry, development and expansion continued in 2003 of unique, modernized, technically equipped laboratories (Plasmochemical Technology Laboratory, Polymer Synthesis Laboratory, Impact Properties Laboratory). At the Institute for Physical and Consumer Chemistry, the plasmochemistry laboratory was reconstructed, and a unique ultrasound spectrometry laboratory was built.

Faculty of Fine Arts  
Brno University of Technology  
Rybářská 125/13/15, 603 00 Brno  
tel.: +420 541 146 850  
e-mail: [jmeno@ffa.vutbr.cz](mailto:jmeno@ffa.vutbr.cz)  
<http://www.ffa.vutbr.cz>



**Faculty of Fine Arts**

**Dean:** Prof. PhDr. Jan Sedlák, CSc. (from 1. until 31. 12. 2003 in charge of administration)

**Vice-deans:** PhDr. Pavel Ondračka  
 Deputy Dean, Teaching  
 Ak. soch. Zdeněk Zdařil  
 Development and material supply  
 Assoc. Prof. Dr. Jiří H. Kocman  
 Creative activities, external relations

**Secretary:** Mgr. Jaroslava Bílá

**Chairman of the Academic Senate:** Mgr. Rostislav Niederle, Ph.D. (to 30. 4. 2003)  
 Prom. ped. Václav Stratil (from 30. 4. to 23. 9. 2003)  
 Mgr. Irena Armutidisová (from 24. 9. 2003)

### Fields of study • Studios, departments, and sections

#### Sculpture

Sculpture Studio 1  
 Assoc. Prof. Michal Gabriel  
 Sculpture Studio 2  
 Assoc. Prof. Jan Ambrůz

#### Painting

Painting Studio 1  
 Assoc. Prof. Petr Veselý  
 Painting Studio 2  
 Assoc. Prof. Martin Mainer  
 Painting Studio 3  
 Assoc. Prof. MgA. Petr Kvíčala

#### Graphics

Graphics Studio  
 Margita Titlová – Ylovsky  
 Painting Studio  
 Prom. ped. Václav Stratil  
 Assoc. Prof. Mgr. Josef Daněk (from 1. 9. 2003)

#### Graphic Design

Graphic Design Studio  
 Mgr. Václav Houf  
 Paper and Book Studio  
 Assoc. Prof. Dr. Jiří H. Kocman

#### Conceptual Tendencies

Intermedia studio (from 1. 9. 2003)  
 Prom. ped. Václav Stratil  
 Environmental Studio  
 Vladimír Merta

Video-multimedia-performance

Video Studio

Prof. Peter Rónai

Multimedia Studio

Mgr. Richard Fajnor

Performance Studio

Assoc. Prof. Tomáš Ruller

Industrial Design

Product Design Studio

Zdeněk Zdařil

Body Design Studio

Assoc. Prof. Mgr. Jana Preková

Department of Theories and Complementary Studies

Mgr. Blahoslav Rozbořil

Evening Drawing Section (to 31. 8. 2003)

Assoc. Prof. Mgr. Josef Daněk

Photography Section

Mgr. Irena Armutidisová

Information Technology Section

Ing. Jaroslav Maloch, CSc.

Video Section

Ing. Dalibor Vlašín

### **Bachelor's degree fields of study**

KKOV 82-16-711	Fine Art – painting – Free Creation
KKOV 82-16-721	Fine Art – Sculpture – Free Creation
KKOV 82-16-730	Fine Art - Graphics
KKOV 82-16-746	Fine Art – Graphic Design
KKOV 82-16-747	Fine Art – Conceptual Tendencies
KKOV 82-16-748	Fine Art – Video-Multimedia-Performance
KKOV 82-17-7	Industrial Design

### **Branches of the Master's degree programme**

KKOV 82-16-811	Fine Art – painting – Free Creation
KKOV 82-16-821	Fine Art – Sculpture – Free Creation
KKOV 82-16-830	Fine Art - Graphics
KKOV 82-16-846	Fine Art – Graphic Design
KKOV 82-16-847	Fine Art – Conceptual Tendencies
KKOV 82-16-848	Fine Art – Video-Multimedia-Performance
KKOV 82-17-8	Industrial Design

The Czech Ministry of Education, with the consent of the Accreditation Commission awarded on 4. 6. 2003 decision no. 20172/2003-30, expanded the accreditation of the Master's degree programme in Fine Arts and Teaching in the English Language at the FFA BUT, to have effect until 25. 1. 2006

### **Pedagogic and creative mission**

The study branches at the Faculty of Fine Arts are designed to be an even mixture of classical design and new art disciplines. The large number of study branches is the result of the fact that the FFA BUT is the only institution of higher education of its kind in Moravia and Silesia. The design field and use modern technologies fields form a link between the arts faculty and the other faculties at the BUT. The influence of the FFA BUT extends beyond the region, and abroad. The faculty consists of artists from Brno, and from Prague, Olomouc, and Bratislava. Students, too, come from all over the republic and from abroad. The faculty also offers some special courses that cannot be found at any other art school in the Czech Republic (body design, paper and book).

In the course of the four-year Bachelor's degree study, the mastering of all the professional and handicraft skill and technological methods is given much attention since this is the basis for the development of the student's artistic talent. Students who, in view of their creative development, prove to be of great promise are admitted to the follow-up two-year Master's degree courses where they are encouraged to take an independent approach to more sophisticated artistic concepts. Courses in studios at both study levels are complemented by a number of required and optional courses and lectures on theory. At the end of their Master's degree study, students are required to submit both practical and theoretical degree projects.

Graduates of all the study branches and specialization who have proved a great talent will assert themselves as free-lance artists. However, they form only a small group of individuals, who will seldom start off as independent artists right from the beginning, as their emancipation is usually preceded by a period of artistic development. This category of young artists has usually attended one of the classical discipline studios. Due to high demand, students of designer branches and specializations find jobs very quickly, while those studying the new disciplines will usually have to seize the occasional opportunity. With all this in mind, the faculty courses are shaped to equip all graduates to find temporary and possibly permanent alternative chances to make use of their technological, handicraft, theoretical, and managerial skills. A number of faculty graduates teach at both general and specialized secondary schools, and some of them have become curators.

### **Exhibitions by teachers, students, and graduates**

- Space on the Tapestry. Selection of 10 years of tapestry production at Valašské Meziříčí. Moravská galerie v Brně - Uměleckoprůmyslové muzeum, Brno, 10. 1. - 16. 2. 2003 (Petr Kvíčala and Margita Titlová)
- Painting group Kartel. Galerie Milana Zezuly, foyer of the Municipal Theatre in Brno, 6. 2. - 6. 3. 2003 (Horák, Fišer, Lungová, Matyska, Pikous)
- Under other circumstances that might be true. Dům umění města Brna - Dům pánů z Kunštátu, Brno, 6. 2. - 9. 3. 2003 (Nálevka, Cenek, Ronovský, Klímová, Mikuláščík, Brožka, Havlíček, Goldová, Doležal, Kalinová, Ryška)
- Public presentation of work by students of FFA BUT in Brno. FFA building at Rybářské and Údolní in Brno, 8. - 9. 2. 2003
- Brno circuit. Exhibition Hall, Sokolská 26, Ostrava, 13. 2. - 14. 3. 2003 (P. Kvíčala)
- Petr Kvíčala "Get inside". Galerie Behémot, Praha, 15.1. - 15.2.2003

- The world as a structure – structure as a picture. Galerie u Bílého jednorožce v Klatovech, 12. 4. – 4. 6. 2003; Zámek Klenová, 12. 4. – 9. 7. 2003 (Filip Cenek, Tomáš Dvořák, Michal Gabriel, Petr Kvíčala, Martin Mainer, Tomáš Medek, Vladimír Merta, Jiří Načeradský, Tomáš Ruller, Václav Stratil, Margita Titlová)
- Tomáš Ruller. Time enough for love. Moravian Gallery in Brno – Uměleckoprůmyslové muzeum, Brno, 17. 4. – 18. 5. 2003
- Pavel Matyska – pictures. Galerie DUNA\_TRI, Bystřice nad Pernštejnem, 17. 5. – 15. 6. 2003
- Third Zlín Salon of Young Artists. Regional Gallery of Fine Arts in Zlín, 29. 5. – 31. 8. 2003 (Filip Cenek, Jiří Havlíček, Ondřej Doležal, Ladislav Jezbera, Jana Kalinová, Milan Mikuláščík, Jan Nálevka, Pavel Ryška, Petr Šesták, Lubomír Typlt, Robert Vlasák)
- Exhibit of work by Master's studies graduates from the FFA BUT v Brně. FA Building, Údolní 19, 26. – 30. 5. 2003
- Petr Veselý. Around things; things around. Galerie ad astra, Chateau Kuřim, 5. 6. – 13. 7. 2003
- Public presentation of works by students of FFA BUT in Brno. FFA Building and Mitrovský Summer Palace, 14. – 15. 6. 2003
- Students of studio Michal Gabriel at FFA BUT in Brno, Galerie DOUBNER, Praha, 20. 6. – 3. 7. 2003 (Jan Benedík, Petr Holub, Dušan Homoliak, Natálie Chalcarzová, Natálie Kantorová, Jana Matějková, Barbora Motlová, Martin Skalický, Ondřej Staněk, Martina Šedová)
- Paintings by students and graduates of the Faculty of the Fine Arts in Brno. At the former Jenota sugar factory in Želetice, 28. 6. – 31. 8. 2003
- Figurama 2003. Art House of the South Moravian Museum in Znojmo, 1. 7. – 31. 8. 2003
- Who sews the wind. Galerie kritiků, Palác Adria, Praha, 9. 7. – 3. 8. 2003 (Tereza Damcová, Anna Irmanová, Silva Kupčová, Lenka Pazourková, Lucie Peroutková, Jiřka Žabková)
- "Aerobics and the swimming pool". Exhibit of pictures by Kateřina Pažoutová. Galeryje 9, Brno, 17. 7. – 10. 9. 2003
- How to design – excellent products of 2003. Galerie Design centra ČR, Brno, 21. 7. – 26. 10. 2003
- 5 September. Poem.pictures.installation.projection.jazz. Galerie Doubner, Praha, 2 – 14. 9. 2003
- Jan Ambrůz. Galerie ARS, Brno, 2. 9. – 2. 10. 2003
- Malukale Wopp. Galerie Lužánky, Brno, 19. – 26. 10. 2003 (Lukáš Orlita, Kateřina Pažoutová, Lenka Pilařová, Marie Vránová)
- J. H. Kocman. Hand-made paper sheets / books. Galerie Hrozen, České Budějovice, 30. 9. – 18. 10. 2003
- Steiner formát. Café Steiner, Gorkého 38, Brno, 1. 10. 2003 (Václav a Alois Stratilovi)
- Pavel Korbička. Surface. Galerie Katakomby, Zelný trh 9, Brno, 13. 10. – 15. 11. 2003
- KORIDOR Pavla Korbičky. Pražákův Palace – Room for one – work of the Moravian Gallery in Brno, 14. 10. 2003 – 4. 1. 2004
- Ejhle, světlo. Uměleckoprůmyslové muzeum and Místodržitelský palác, Moravské galerie in Brno, 16. 10. 2003 – 29. 2. 2004 (Petr Kvíčala, Martin Mainer, Tomáš Ruller, Václav Stratil)
- Figurama 2003. FFA Building, Údolní 19, Brno, 21. 10. – 14. 11. 2003
- Faculty of Fine Arts at the Brno University of Technology, 1993 – 2003. Dům umění města Brna, 4 – 30. 11. 2003
- Painting Studio 3, FFA BUT in Brno, Městské divadlo Brno, 4. 11. – 5. 12. 2003
- Untitled – Petra Herotová. Galerie Studentského centra, Brno, 8. 10. – 7. 11. 2003
- Richard Fajnor – The artist's pact. Dům pánů z Kunštátu, Brno, 11. 11. – 14. 12. 2003
- Marian Palla, Zameř' mou hrud' (Sweep my chest) Skleněná louka, Brno, 19. 11. – 10. 1. 2004
- The smell of leopard's skin. Contemporary graduates and students of Czech and Slovak university art programmes, on the topic of seduction. Pražákův palác, Moravská galerie v Brně, 20. 11. 2003 – 11. 1. 2004 (Jan Benedík)



- Ornament in contemporary art. Galerie města Plzně, 16. 10. – 23. 11. 2003 (Jan Ambrůz, Vladimír Havlík, Petr Kvíčala, Martin Skalický)
- Foretold harmony – installation – Ladislav Jezbera. Dům umění České Budějovice, 27. 11. 2003 – 4. 1. 2004
- Kateřina Tmějová – Jana Besmáková – Simona Kolářová. Café Steiner, Brno, 3. 12. 2003 – 6. 1. 2004
- Figurama 2003. Vysoká škola uměleckoprůmyslová v Praze, 9. – 12. 12. 2003
- Michal Gabriel and guests Barbora Šlapetová and Lukáš Rittstein. Galerie Tvrdohlaví, Praha, 15. 12. 2003 – 14. 2. 2004
- Rudé právo factory – silhouette. Peter Rónai – Václav Stratil. Gallery Art Factory, Praha 1. 2. – 31. 3. 2003
- Video space. Galerie Kolomana Sokola, Washington D.C., 15. 12. 2003 – 17. 1. 2004 (Peter Rónai)

### **Publications by teachers**

- Marian Palla, Zameř mou hrud'. Brno 2003 ISBN 80-7227-178-4
- Jan Sedlák, The problem of light in inter-war Czech architecture, in: Ars naturam adiuvars. Collection in honour of Prof. PhDr. Miloš Stehlík. Brno 2003, pp. 177-188 ISBN 80-86752-12-7
- Jan Sedlák, The problem of light in inter-war Czech architecture, in: Ejhle světlo (ed. Jiří Zemánek). Moravská galerie v Brně 2003, pp. 310-321 ISBN 80-7027-118-3
- Jan Sedlák – Tereza Petišková – Daniela Veškrnová (eds.), The Faculty of Fine Art at Brno Technical University 1993 – 2003. Brno 2003 ISBN 80-214-2495-8

### **Student competition**

Painting Studio graduate Jana Besmáková won the START POINT Award for best graduate of a university art programme, offered for the first time in 2003 by the Galerie Klatový/Klenová and Chateau Týnec, with Dragon Press printers of Klatový.

Faculty of Information Technology  
Brno University of Technology  
Božetěchova 1/2, 602 00 Brno  
tel.: +420 541 141 139  
e-mail: jmeno@fit.vutbr.cz  
<http://www.fit.vutbr.cz>



# Faculty of Information Technology

**Dean:** prof. Ing. Tomáš Hruška, CSc.

**Vice-deans:** prof. RNDr. Milan Češka, CSc.  
 Creative activities  
 doc. Ing. Vladimír Drábek, CSc.  
 Educational activities  
 prof. Ing. Jan M. Honzík, CSc.  
 External relations, authorized representative of the Dean  
 Ing. Zdeněk Bouša  
 Construction and development

**Chairman of the Academic Senate:** doc. Ing. Jaroslav Zendulka, CSc.

**Secretary:** Ing. Zdeněk Bouša

#### **Institutes**

Institute of Information Systems  
 headed by doc. Ing. Jaroslav Zendulka, CSc.  
 Institute of Intelligent Systems  
 headed by doc. Dr. Ing. Petr Hanáček  
 Institute of Computer Graphics and Multimedia  
 headed by doc. Dr. Ing. Pavel Zemčík  
 Institute of Computer Systems  
 headed by prof. Ing. Václav Dvořák, DrSc.

#### **The FIT offers university education in the following accredited study programmes:**

- **Information technologies, Bachelor's degree programme**  
 (study area: Information technologies, 3 years, started in 2002, in 2002/2003 in its second year)
- **Electrical engineering and informatics, Master's degree programme**  
 (study area: Computer technology and informatics, 5 years, in 2002/2003 entered its third (last) year)
- **Information technologies, doctoral degree programme**  
 (study area: Information technologies, 3 years, active)
- **Information technologies, follow-up Master's degree programme**  
 (study areas: Information systems, Computer graphics and multimedia, Intelligent systems, Computer systems and networks, a 2-year programme, to be started in 2005)

Study programmes at the Faculty of Information Technology cover both hardware and software of computer systems. They provide both theory of informatics and basics of theoretical computer science as well as their practical applications to analysis, design specification, operation and maintenance of computer systems, computer networks, data acquisition equipment, transmission equipment and other computing applications.

Computer technology applications in a number of disciplines are of such a great importance that they may require a combination of knowledge of computer technologies and some other field of science.

The Master's study programme at the Faculty of Information Technology is also open, when all entry requirements are met, to graduates of Bachelor's programmes at other schools and faculties devoted to information and information technology. It can also be taken as support for subjects under the Faculty of Electrical Engineering and Communication focusing on medical information and biomedical engineering

### Important events

The year was the second year of independent existence for the Faculty of Information Technology. Its main task was to begin a completely new programme of Bachelor's studies, for which more than 600 students were accepted.

### Most important activities and events of 2003

- FIT BUT Open House Day, 15. 1. 2003,
- traditional FIT/FEEC faculty grand ball at the newly built BUT Centre, very successful both socially and organizationally, 24.1.2003
- visit by the Minister of Information of the CR Vladimír Mlynář to the faculty on 13. 3. 2003,
- took part in creation of BUT Long-Term Plan
- updating the Long-Term Plan for the faculty,
- engaged the active efforts of all teaching staff at FIT for the preparation of new study programmes,
- 3 newly-undertaken Grant Agency Czech Republic projects; in 2003 there were a total of 11 GACR projects in progress (6 standard projects and 5 post-doctorate projects),
- 10 newly-undertaken Higher Education Development Fund projects,
- 1 EU project was submitted and accepted (project AMI, Augmented Multimodal Interfaces, coordinated by the University of Edinburgh, in which the FIT is participating, under the 6th EU framework programme); 6 EU projects were in progress at the faculty in 2003,
- Ing. Lukáš Burget: presentation of project MultiModal Meeting Manager (M4) and faculty at IST 2003 Event Milan, Milano, IT, 5. 10. 2003
- Ing. Petr Motlíček, Ph.D.: conducted tutorial "Very Low Bit Rate Speech Coding" at summer school EuroMasters in Speech and Language, Barcelona, 7. - 11. 7. 2003.
- took part in trade fair GAUDEAMUS 2003, with presentation of faculty and its study programmes,
- efforts of teaching personnel in organizing information trips to gymnasiums and secondary trade schools,
- activities of Vice-dean Assistant Prof. Ing. Vladimír Drábek, CSc. and study advisor Ing. Miloš Eyselt, CSc., to formulate a mechanism for internal and inter-faculty distribution of financial resources for teaching (especially FIT/FEEC) and exchange of education services,
- activity of Vice-dean for external affairs Prof. Ing. Jan M. Honzík, CSc. focused on systematic work in the area of programme SOCRATES / ERASMUS and other European programmes,
- activity towards realization of project "Research on Information and Management Systems" led by Prof. Ing. Jan M. Honzík, CSc.,
- activity to implement the Czech Ministry of Education development programmes for the preparation and implementation of the Bsc. programme "Information Technologies" and the preparation of a distance form of this programme for accreditation, led by Prof. Ing. Jan M. Honzík, CSc.
- organization of a meeting of computer-oriented institutions, departments, and faculties in the Czech Republic and Slovakia CSEW 2003 (Computer Science Education Workshop), which took place in Přímětice u Znojma on 6-8.11.2003.

- establishment and organization of a seminar for doctorate students from the CR and SR entitled PAD 2003 (Computer Architecture and Diagnostics), Zvíkovské Podhradí, 24. 9. – 26. 9. 2003, establishment of Prof. Ing. Jan Hlavička, Dr.Sc. Award.
- completion of proposal for European project REHITECH (Reconfigurable Embedded Systems, High-Level Specification and advanced Techniques for Design and Test) in October 2003 in order to create a Network of Excellence; tender process under way,
- completion of proposal for European project COST (Making Component-based Development Cost-effective for SMEs) in November 2003 (category Cooperative Research), tender process under way,
- co-organizer of conference MOSIS '03 (Modelling and Simulation of Systems), Brno, 28. – 30. 4. 2003, main organizer FEEI VŠB-TU Ostrava,
- co-organizer of conference ISIM '03 (Information Systems Implementation), Brno, 28. – 30. 4. 2003, main organizer FEEI VŠB-TU Ostrava,
- Microsoft Day at FIT BUT, 22.5.2003
- commencement of student segment of FIT educational information system.

### **New assistant professors and professors**

Four academic personnel from the FIT BUT in Brno were named Assistant Professors in 2003.

### **Most important research result**

#### **Evolvable Components: From Theory to Hardware Implementations**

Using evolution algorithms, unique digital circuits were created that work as adaptive pictorial operators. The solution makes use of so-called virtual evolvable circuits. These practical results were gained on the basis of a newly-constructed theory of evolving components. Part of this theory is the formal definition of an evolving computer, and investigation of its properties. The research results were presented at a number of prestigious conferences (such as NASA/DOD Conf. on Evolvable Hardware 2003) and summed up in the monograph: Sekanina, L.: Evolvable Components: From Theory to Hardware Implementations. Natural Computing Series, Springer Verlag, Berlin, 2003. On the basis of these results, Lukáš Sekanina was awarded the Siemens Prize for dissertation work, the Josef Hlávka Prize, and a Fulbright Scholarship for academics and lecturers to cover the costs of a research stay at NASA JPL Pasadena.

### **Student competition**

The Student EEICT Conference is focused on competitive presentation of the work of students from two faculties, the FEEC and FIT. In 2003 the student conference took place on 24 April, sponsored by important electrotechnical and information technology firms. Besides the opportunity to present the best student and doctoral work, the conference is also an excellent opportunity for strengthening ties between the faculties and their industrial partners. On 29 May 2003 another international student conference was held, jointly-organized by the FEEC and FIT.

### **Appraising the quality of teaching**

The Programme Councils are responsible for the appraisal of the quality of teaching according to the accredited programmes at the faculty. The appraisal is carried out at the student plan level and its updating and innovation, and individual subjects.

Among the materials for appraising the quality of teachers and teaching are the results of the student evaluations. Subjects to be appraised are determined by the head of the institution so that all subjects and teachers are visited over a five-year cycle. The evaluations are in the form of anonymous questionnaires, which are appraised by the Student Union. The results are then passed to the head of the institution.

### **Development, building, and moving in 2003**

Unlike 2002, when a number moves and building projects were undertaken at the FIT to stabilize the situation of the faculty at Božetěchova 2, the main attention in 2003 was concentrated by the leadership of the BUT and of the FIT on solid preparation of a strategic investment plan for locating and stabilizing the FIT at Božetěchova 2 and Božetěchova 1. A project was prepared for a construction permit process, and in late 2003 the BUT began its own construction permit process. The project includes architectural remodelling of the terrain, and a basic outline in correspondence with the FIT's building programme, and defines the basic technical standards for equipping the building in view of sound requirements and minimization of operating costs (intelligent building).

In preserving the architectural heritage, reconstruction of the final southern enclosure was started, with completion scheduled for 4/2004. Repairs were started including structural securing of the old morgue, one of the oldest and best-preserved buildings remaining from the Kartuzian monastery.

Provisional modifications were made to the second part of the main courtyard on the grounds of Božetěchova 2, and a self-service buffet was built as a temporary measure until a refectory could be built at Božetěchova 1. The Centre for Computer Technology was made accessible to physically impaired students, as were the computer rooms at Božetěchova 2.

# Departments of BUT



## COMPUTER AND INFORMATION SERVICES CENTRE (CISC)

Antonínská 548/1, 601 90 Brno

tel.: +420 541 141 111

<http://www.vutbr.cz/cvis>



## CENTRE OF EDUCATION AND COUNSELLING (CEACO)

Antonínská 548/1, 601 90 Brno

tel.: +420 541 141 111

<http://www.vutbr.cz/cevapo>



## INSTITUTE OF FORENSIC ENGINEERING (IFE)

Údolní 244/53, 602 00 Brno

tel.: +420 541 141 111

<http://www.vutbr.cz/usi>



## CENTRAL LIBRARY OF BUT (CL)

Antonínská 548/1, 601 90 Brno

tel.: +420 541 141 111

<http://www.vutbr.cz/uk>



## VUTIAM PRESS

Antonínská 548/1, 601 90 Brno

tel.: +420 541 141 111

<http://www.vutbr.cz/nakl/>



## CENTRE OF SPORTS ACTIVITIES OF BUT (CESA)

Technická 2896/2, 612 00 Brno

tel.: +420 541 141 111

<http://www.vutbr.cz/cesa>



## DORMITORIES AND REFECTORIES IN BRNO (DaR)

Kolejní 2905/2, 612 00 Brno

tel.: +420 549 255 366, fax: +420 541 211 266

<http://www.skm.vutbr.cz>

**Director:** Ing. Jaromír Marušinec

In the fall of 2003 the organizational structure of the Centre for Computer and Information Services was adapted to meet new demands on the telephone network and the backbone computer network, and the introduction of SAP. The CISC continued with the development of information technology at BUT as described in the chapter Information and Communication Technology of this year's annual report.

### **Administration Department**

- saw to administration of the CISC and information technology at BUT
- undertook coordination and economic management of CISC and BUT information technology
- administered BUT university software
- coordinated introduction of new information systems SAP, ApolloVUT, and StudisVUT

### **Backbone Administration Department**

- built optical communication infrastructure
- hardware and software administration of network services
- security measures within the BUT computer network
- cooperation with authorized staff on administration of faculty networks
- connection of schools and non-profit organization to academic backbone network
- began expansion and operation of BUT telephone network and mobile communications

### **Operations Department**

- carried out training and testing for ECDL certificates
- operated Rector's Office work stations and network servers
- produced identification cards for BUT personnel and students
- administrated multimedia equipment including borrowing records

### **New Department: Economic Systems**

- operated the terminating economic information EkonFIS
- operated the project of transfer to new economic system SAP
- operated central printing facility producing data sheets and payment records
- carried out training of SAP users

### **Database Department**

- played important role in introduction of SAP
- administered the Central Database Warehouse
- built data structure for new StudisVUT system
- designed and directed integration of faculty data sources into central data warehouse
- minimum data interface level was established for STUDIS data integration system
- administered Oracle, Progress, and MS SQL databases
- integrated SAP and other systems at BUT



### Development Department

- created powerful new web application for CESA university sports programme
- created new web tool for electronic admissions applications
- created new agenda for support of admissions process
- created many new modules for centre. stud. system for employees (ApolloVUT) and for students (StudisVUT).
- laid foundation for faculty layers of study systems, implemented at the FCH and FME
- administering many projects for diploma students at the Faculty of Information Technology
- prepared new internet and intranet portal at BUT
- conducted training of personnel and main users of new information system

## CENTRE OF EDUCATION AND COUNSELLING (CEACO)

**Director:** Ing. Ladislav Janíček, PhD., MBA (to 31. 7. 2003)  
Ing. Vlastimil Bejček, CSc. (from 1. 8. 2003)

The Centre for Education and Counselling (CEACO) consists of three organizational parts:  
Lifelong Learning  
University Consultancy – Consulting Centre  
University of the Third Age

On 1. 8. 2003 the Programme Board for the Centre for Education and Counselling met for the first time, composed of: the quaestor, a vice-dean for strategy and education, 2 representatives from BUT faculties, 2 representatives of the BUT academic senate, and the CEACO director.

### Activities in 2003

**Lifelong Learning** continued during 2003 to provide commercial courses for various target groups, supply internal education – language courses (English, German), administration (documents), economic (travel costs for foreign projects), and computer skills (ECDL). It organized the international conference EUCEN and the trade fair Gaudeamus.

**Lifelong learning courses** (Project Direction, Direction International Projects, European Consultant, E-CAD, M-CAD, Quality Direction, follow-up Pedagogic Studies, and ECADS, as well as intensive Czech language courses) consisted of a total of 990 hours of instruction, with 600 participants including foreign students.

**Internal Employee Education:** In December 2003, a study was carried out among BUT personnel on internal education (language courses, additional pedagogical studies, project management, international project management, computer skills, creation of study materials for e-learning). Internal education will continue in 2004 on the basis of the resulting data.

### **University Consultancy – Consulting Centre**

The aim of consultancy centre is to provide consultation in the areas of psychological, social-legal, educational, and professional consulting for students and those interested in studies at the BUT. In 2003 consulting services in the individual fields were provided by external associates and two permanent employees.

The consultancy centre provided free within the context of its programme the following development courses for students: How to Succeed in a Tender Bid, The Legal Minimum, Assertiveness, Training in Communications Skills, Creativity, How to Succeed in IQ Tests, Memory Training, How to Cope Effectively During University Studies, Perspectives for Personal Development, and others.

Around 500 students of various faculties took advantage of BUT Consulting Centre in 2003.

On the basis of a decision by a Ministry of Labor commission, the CEACO was awarded, on 8 September 2003 a permit to act as an employment agency. The consultancy centre can arrange contacts between BUT students and graduates and organizations that are looking to the BUT for new employees.

From January to April, research was conducted in the form of a questionnaire on the job prospects of BUT graduates. 3,500 graduates from all eight BUT faculties were involved. Of these, the response rate was 60.2 %.

This extensive questionnaire research has been quite successful. It has laid a firm foundation of regular longitudinal research on graduates to allow comparison over time. The data acquired were presented in a final report called "Research on Employment of BUT Graduates in Practice, One Year after Completion of Studies in 1999-2002"; the report was published in May.

### **University of the Third Age**

The University of the Third Age at the BUT in Brno (U3A) began its fourth year of operation in 2003. Last year, the first class of 108 students completed their third year of studies, divided into 8 specialized categories.

The programme of the first- (141 students) and second- (142 students) year classes consists of lectures once per week for a period of 26 weeks. In the third year class (49 students), studies are divided into specialities, with emphasis on initiative on the part of the students themselves; because of the number of students there are 2 specialized courses on Current Television Technology, and Theory and History of the Creative Arts. High interest in follow-up computer skills courses has led to the opening of 6 parallel courses per semester, with a total of 172 students. The fourth elective year that began in 2003 has 83 students.

Inter-city and international cooperation is being developed successfully. A videoconference was held with seniors in the course "The Internet in Practice" with students of computer courses at the FEEC, with the participation of the coordinator of the international project EuCoNet. In February at the BUT the second strategy meeting of seniors was held for the international project Socrates Grundtvig 2, the European competency network for making the Internet accessible to seniors.

Third-year students working with the international EuCoNet project took part in 2003 in the 3rd and 4th strategy meetings of seniors in Vicenze and Glasgow.

The secretariat of the national Association of Universities of the Third Age worked at the BUT in Brno in 2003. Besides two meetings of the board of the U3A, there was also a meeting of the General Assembly of the Association of Universities of the Third Age held here on 13 November 2003. More information about the activities of the AU3V can be found at <http://www.vutbr.cz/AU3V>.

**Highlight events of 2003:**

International Conference EUCEN, 14. – 17. 5. 2003

Gaudeamus 2003 trade fair, 21. – 24. 10. 2003

**Information and communications technology in education**

During October – December 2003 a new website for the Brno Centre for European Studies was opened at <http://www.bces.cz> and the pages of CEACO at <http://www.cvp.vutbr.cz>. The marketing information system Marketing Manager® has been implemented, and the foundation laid for the creation of a CEACO portal for internal education of BUT personnel (on the foundation of the Microsoft Office SharePoint Portal Server), and the creation of long-distance support for the complete e-learning environment (Microsoft Class Server). In 2004 the Centre of Education and Counselling will focus more closely on the support for information technologies introduced in the 4th quarter of 2003.

**INSTITUTE OF FORENSIC ENGINEERING (IFE)**

**Director:** Prof. Ing. Albert Bradáč, DrSc.

**The following programmes are available:**

a) The lifelong education programme for forensic experts and candidates according to Art. 60 of Act 111/1998 Sb. in the following fields of study: road accidents; repairs and assessments of motor vehicles and machines; civil engineering and economics – real estate, enterprises, movable property, machinery, equipment, and motor vehicle appraisal; general rules of forensic engineering. In 2003 IFE had a total of 177 graduates, and 3 four-semester and 4 one-semester courses were begun.

b) The accredited doctoral programme in study field 39-47-9 Forensic Engineering, offered by the faculties of civil and mechanical engineering in cooperation with the Institute; with 73 doctoral students studying at present, and 4 having received their degrees in 2003.

One associate professor was appointed at the Institute of Forensic Engineering in November 2003.

**Research, conferences**

In cooperation with the European Association for Research and Analysis of Accidents and the Association of Forensic Experts of the Czech Republic, the traditional conference of forensic experts was held in January 2003, followed by the annual ball; in June a conference on topical problems in forensic engineering related to road accident analysis was held as part the programme of the Autosalon 2003 fair.

**Expert opinions**

The Institute provides expert opinions in the areas of transport, electronics, power engineering, electrical engineering, economics, metallurgy, projecting, civil engineering, mechanical engineering, and water management. A total of 49 expert opinions were issued by the Institute in 2003.

### Editing and publishing

The Institute publishes a journal entitled "Forensic Engineering – journal for technical and economic forensic experts)" through Akademické nakladatelství CERM Brno, s.r.o.

### IFE certification authority

The Institute has its own Certification Authority, which is accredited by the Czech Accreditation Institute under serial number P 3072 as an unbiased and independent body for granting expert certifications under the CSN-EN 45013 standard. In 2003 twenty-nine new experts were certified by the Institute, with another 77 having applied and attended a specialized training course. Certifications were issued to 56 experts in property appraisal, 3 for appraisal of movables, machines, and equipment, two for enterprise appraisal and one in road accident analysis.

## CENTRAL LIBRARY OF BUT (CL)

**Director:** Mgr. Nataša Jursová

In the year 2003 the library introduced the new library system Aleph500. From January 2003 records of documents were analyzed and tools developed for acquiring data from the internal format of the MDOKIS system. Library personnel were trained to work with Aleph500 system clients, and became thoroughly reacquainted with current standards in library service. The project peaked over the summer months, and after the final system checks using "live" information, the Aleph500 system was put into full operation at VUT libraries for the beginning of academic year 2003-2004.

In the context of the transfer to the new Aleph500 library system, important steps were taken to unify the processes necessary for its effective functioning

- Collections were given bar-coded labels. Previous practice had lacked standardization; from 2004 VUT libraries use procedures standard throughout the CR, making clear identification possible anywhere in the country.
- Unified records of external readers are now kept. Electronic cards were chosen as a medium, particularly to enable more secure reader identification.

Individual stations on the VUT library system were equipped with computers purchased with resources provided through grant projects.

To create a unified framework for the Central Library of BUT and the BUT Area Libraries as a single organizational unit, handbooks on Library Regulations for BUT Central Library, Library Regulations for BUT Area Libraries, and Price List for Library Tasks at the BUT Central and Area Libraries were produced.

The BUT Central Library functioned as a coordinator for specialized library services, and provided a venue for scholastic and education activities organized by the University of Technology.

Co-operation with the University of the Third Age entered its third year, confirming previous experience that inter-generational meetings at the library have been beneficial on a general human level, as well as providing an impulse for processes of education and knowledge.

In the first half of 2003, testing of electronic forms of instruction for first-year BUT students was conducted: academic texts along with questionnaires were posted on the Central Library website. From the beginning of the new academic year in fall 2003, these systems were in full operation.

In addition to basic instruction, courses and consultations were held to improve skills of the BUT academic community in working with information databases.

The inter-library borrowing system was introduced for exchange with domestic and foreign libraries, arranging for borrowing of documents or copies. The extent of bibliographic information and possibilities for transfer of texts resulted in a large increase in this service.

Besides the borrowing system, which is provided for BUT users with no explicit limitations, borrowing services were also arranged for general users defined under the Central Library Regulations system.

## VUTIUUM PRESS

**Director:** PhDr. Alena Mizerová

In 2003 the university published 265 titles. The faculties prepared for publication their conference briefing books, study materials, and promotional materials. The publishing house published monographs, academic papers, textbooks, workbooks, school journals, collections, and translated titles for the broad professional audience, in both paper and electronic form. In electronic form VUTIUUM issues its series of diploma and graduation speeches, abbreviated versions of doctoral works, and regularly distributes the journal "Events at the BUT in Brno".

In 2003, in which the entry of the Czech Republic into the European Union was decided, VUTIUUM Press focused on titles related to issues of university education in the European environment. Working closely with the Centre for the Study of Higher Education (CSVŠ) and the Centre for Higher Education Policy Studies (in the Netherlands), it published the edition: *Real-Time Systems, Reflections on Higher Education in the Czech Republic, Hungary, Poland, and Slovenia* (ed. Jan File, Leo Goedegebuure). The book was presented in Prague and Brno with the authors in attendance as part of the seminar "What Kind of Higher Education System Do we Bring to the EU?" The seminar was organized by the Ministry of Education, the CSVŠ, the Brno Centre for European Studies, VUTIUUM Press, and the Region of South Moravia. In Prague the seminar was held in the Hall of Mirrors at the Ministry of Education with the attendance of P. Buzková, Minister of Education; and in Brno at the Neo-Baroque lecture hall of the BUT Centre. Among the lecturers was P. Kolář, Deputy Minister of Education.

For the Compostela Group of Universities, VITIUUM Press worked with Masaryk University on the publication *Cooperative Education in Europe, A Partnership between Government, Employer, Student,*

and the University (ed. M. van Rooijen). With the Centre for the Study of Higher Education it issued the title *The University Student in the Czech Republic 2002* (L. Menclová, J. Bašťová, K. Kronrádová), and in cooperation with BCES it published *The Brno Universities* (ed. Don Sparling).

Other significant titles included:

V. Veselý *My Trip to China*: working closely with the author was his daughter Prof. A. Štěpánková Velselá. With her assistance VUTIUM presented the book to the general public in Brno and Prague (at the Náprstek Museum in cooperation with the Czech China Society). Another was the first Czech translation of Gödel's Proof by E. Nagel and R. Newman.

For its edition of textbooks in translation VUTIUM purchased the rights to *Mechanical Engineering Design* by J. E. Shigley, Ch. R. Mischke, and R.G. Budynas, 7th edition by McGraw Hill.

The range of VUTIUM's publication work was presented at the Czech pavilion at the book fairs in Frankfurt am Main and in Bratislava. It organized the joint presentation by 14 schools of higher education at the book fair in Prague. For the Brno universities and BCES it prepared a joint presentation at the first book fair in Brno, for which it also organized the seminar *Prospects for University Publishers in the European Environment*, with talks by L. Kundera, E. Ondráčka, and A. Erzdíaková.

A focused marketing strategy and regular participation in book fairs and exhibitions resulted in an increase in the volume of orders, which in turn necessitated a strengthening of VUTIUM's marketing and distribution section, and sparked plans to set up its own retail bookshop.

The success of the VUT's publishing activities was made possible by a clear division of labour between the individual faculties and the university publisher, and also by generous financial support from partners in the industrial sector, who enabled us to print another edition of the textbook *Physics*.

For further information see Tables VIII – 1 and VIII – 2.

## CENTRE OF SPORTS ACTIVITIES OF BUT (CESA)

### Director:

PaedDr. Jaroslav Bogdálék

The year 2003 was one of consolidation for the CESA at the faculties. Teaching methods were standardized, the number of students involved in all forms of sports increased, the modernization of physical education and sports facilities continues, as does the upgrading of conditions for the teaching of a large number of sports specializations. Another success was the participation by students in the 2nd Czech Academic Games in Ostrava.

### Teaching:

- in 2003 the number of BUT students attending at least one of the 40 sports offered reached 7000,
- an electronic registration for physical education and sports was perfected, and was very successful in coping with heavy use by students.
- as part of the upgrade, CESA opened a new fitness centre on the grounds of the FEEC,
- accreditation courses and training of new teachers continued in the area of skiing, aerobics, weight conditioning, and stationary bicycles.

### Major sporting events organized and held in 2003 included :

- Olympics Day Run,
- Aerobic Mania,
- 17 November Run,
- Upstairs Race at the Faculty of Mechanical Engineering,
- Christmas Games, and a number of other events.

At the end of the year the traditional BUT Ball was held, and the best athletes were recognized by the Rector of BUT.

### Major results from the Czech Academic Championships 2003:

#### JUDO

• Pavla Daňková	student FCE	3rd place, to 61 kg
• Karel Krajča	student FME	3rd place, to 90 kg
• Robert Schottl	student FME	3rd place, to 90 kg
• Zdeněk Špěra	student FEEC	3rd place, to 66 kg
• Václav Prokop	student FEEC	3rd place, to 100 kg
		3rd place, category BRH
• Jiřka Meitnerová	student FCE	2nd place, to 72 kg
• Antonín Kočnar	student FEEC	2nd place, to 73 kg
• Martin Šindelka	student FEEC	2nd place, to 100 kg
• Iva Feldová	student FCE	1st place, to 68 kg
• Antonín Bezunk	student FME	1st place, to 81 kg

#### TABLE TENNIS

• Adéla Heinclová	student FCE	3rd place, doubles
-------------------	-------------	--------------------

#### ORIENTEERING

• Veronika Křístková	student FFA	3rd place, D20
• Vladan Henek	student FAST	3rd place, H 21
• Petr Zvěřina	student FCE	2nd place, H21
• Zdenka Stará	student FCH	1st place, D 21
• Michal Smola	student FEEC	representative, participant in WC

#### SWIMMING

• Mojmír Axman	student FME	3rd place, 4 x 50 freestyle
• Richard Bořuta	student FCE	3rd place, 4 x 50 freestyle
• Vladimír Kusý	student FEEC	3rd place, 4 x 50 freestyle
• Vojtěch Steinbauer	student FCE	3rd place, 4 x 50 freestyle
		3rd place, 50 freestyle

#### KARATE

• Jaroslav Hanzl	student FCE	3rd place
------------------	-------------	-----------

• Stanislav Vechet	student FME	2nd place
• Roman Fildán	student FCE	1st place
<b>MODERN SPORT. KARATE</b>		
• Lubomír Macek	student FME	3rd place European Cup 2003 – Italy
<b>MODERN GYMNASTICS</b>		
• Petra Wertheimerová	student FCE	2nd place
<b>DARTS</b>		
• Marie Šoustková	student FME	2nd place
• Blanka Vojtková	student FCH	1st place, pairs
<b>TENNIS</b>		
• Hana Janečková	student FME	1st place, doubles
<b>FENCING</b>		
• Lukáš Chmela	student FME	1st place, foil
<b>ROWING TRAINER</b>		
• Martin Odehnal	student FEEC	1st place, to 75 kg
<b>WELNESS</b>		
• Daniel Škárka	student FBM	1st place
<b>LA</b>		
• Petr Hrabovský	student FCE	3rd place, 400 m, 4th place, 200 m
• Irena Petříková	student FCE	2nd place, 3000 m, 3rd place, 1500 m
• Libor Kantor	student FEEC	1st place, triple jump 2nd place 110 př.
<b>TAEKWONDO W.T.F</b>		
• Karel Nosek	student FCE,	9th place, WC 9th place, LU
<b>CANOING – white water</b>		
• Jan Viček	student FFA	1st place, AM Praha 1st place, CR Ch. 2nd place, European Ch. – Karlovy Vary



## DORMITORIES AND REFECTORIES IN BRNO (DAR)

**Director:** Ing. Jaroslav Grulich

The BUT provides accommodation and meals at its facilities for its students, staff, and the public.

The BUT Dormitories and Refectories manage 6,687 student beds in the following university dormitories:

Pod Palackého vrchem dormitory at Kolejní 2, 612 00 Brno (3 130 beds)

Purkyňových dormitory, Purkyňova 93, 612 62 Brno (2 248 beds)

Mánesových dormitory, Mánesova 12, 612 00 Brno (261 beds)

Listový dormitory, Kounicova 46/48, 602 00 Brno (1 030 beds).

### Accommodation

#### The Pod Palackého vrchem dormitory

This dormitory is part of the BUT complex providing accommodation, meals, entertainment, and sports facilities. The accommodation part consists of four buildings. The rooms are double and triple occupancy, each with its own bath. In some rooms, access to the Internet is available. Fitness room, gym, boulder centre, and climbing wall are available for leisure, usually with professional CESA trainers. A computer room is also available with access to the Internet. Other services include a post office, the Mahen Library, student club, and cinema, and the dormitory has its own medical clinic.

#### Purkyňovy Dormitory

This dormitory is located in a quiet section of Brno's Královo Pole quarter. Accommodation is provided in four blocks. Rooms are double and triple occupancy, with bath facilities on the individual floors. In some rooms, access to the Internet is available.

A computer room, fitness gym, and TV rooms are available, and there is a medical clinic and dentist's office on the premises.

#### Mánesovy Dormitory

This dormitory is also located in the Královo Pole quarter. Accommodation is provided in two buildings with standard furnishings. There is a bath for each set of one double and one single rooms. In some rooms, Internet access is available. The dormitory is also equipped with a sauna.

#### Listovy Dormitory

The dormitory is located very close to the town centre. Rooms are double occupancy with a bath on each floor. In half the rooms, access to the Internet is available. The dormitories offer additional facilities such as a fitness gym, a playground, and TV rooms.

### Meals

The following is a list of the refectories that can be found on dormitory premises (except for the Mánesovy Dormitory), and are also located at the BUT faculties and Rector's Office.

Meals Centre – Pizzeria Gabriela, at Kolejní 2, 612 00 Brno, capacity 112

Refectory, Kolejní 2, 612 00 Brno

Purkyňova Refectory, Purkyňova 93, 612 62 Brno, cap. 300

Purkyňova Buffet, Purkyňova 93, 612 62 Brno

Restaurant Q, at the FME, Technická 2, 616 69 Brno, cap. 160  
Café at the BUT Centre, Antonínská 1, 601 90 Brno, cap. 24  
Kounicova Refectory, Kounicova 46/48, 602 00 Brno, cap. 336  
Buffet Maruška, FME, Technická 2, 616 69 Brno, cap. 64  
Restaurant V, FEEC, Veveří 95, 662 37 Brno, cap. 96  
Purkyňova Refreshments, Purkyňova 118, 612 00 Brno, cap. 20

For further information see Tables XII -1 to XII -6.

# Tables

### III – 1 ACADEMIC SENATE OF BUT

doc. Ing. František Zbořil, CSc.	Chairperson
Mgr. Václav Božek, CSc.	Vice-Chairperson and Chairperson of the Academic Staff Chamber
Ing. Jaroslav Švec	Vice-Chairperson and Chairperson of the Student Chamber

<b>Academic Staff Chamber</b>	<b>Student Chamber</b>
Mgr. Václav Božek, CSc. (FCE) doc. RNDr. Josef Dalík, CSc. (FCE) RNDr. Pavel Dobis, CSc. (FEEC) Mgr. Richard Fajnor (FFA) Ing. Ivana Groligová, CSc. (FBM) Dr. Ing. Petr Hanáček (FIT) Ing. Helena Hanušová, CSc. (FBM) RNDr. Božena Kábelová (FC) Ing. Vladimír Kutnohorský, CSc. (FEEC) doc. Ing. Zdenka Lhotáková, CSc. (FA) doc. Ing. Eva Münsterová, CSc. (FME) doc. MUDr. Vladimír Novotný, CSc. (FFA) prof. Ing. arch. Alois Nový, CSc. (FA) Ing. Jiřina Omelková, CSc. (FC) RNDr. Pavel Popela, PhD. (FME) doc. Ing. František Zbořil, CSc. (FIT)	Lukáš Berta (FFA) Lenka Burgerová (FA) František Drtil (FEEC) Mgr. Marcel Hádlík (FCE) Ing. Pavel Jelínek (FME) – od 11. 11. 2003 Ing. Petr Jurák (FME) – do 30. 9. 2003 Jan Myšulka (FC) – od 9. 12. 2003 Hana Petrovská (FC) – do 30. 9. 2003 Bc. Monika Sovíková (FBM) Ing. Jaroslav ŠVEC (FIT)
<b>Working Committee</b>	
<b>Legislative Committee</b>	<b>Economic Committee</b>
Mgr. Václav Božek, CSc. Lenka Burgerová Ing. Ivana Groligová, CSc. doc. Ing. Zdenka Lhotáková, CSc. – committee chairperson doc. Ing. Eva Münsterová, CSc. Ing. Jiřina Omelková, CSc. Hana Petrovská – do 30. 9. 2003 Ing. Jaroslav Švec	doc. RNDr. Josef Dalík, CSc. František Drtil Mgr. Richard Fajnor Dr. Ing. Petr Hanáček Ing. Helena Hanušová, CSc. Ing. Petr Jurák – do 30. 9. 2003 RNDr. Božena Kábelová Ing. Vladimír Kutnohorský, CSc. prof. Ing. arch. Alois Nový, CSc. RNDr. Pavel Popela, PhD. – committee chairperson Bc. Monika Sovíková
<b>AS representatives in BUT Construction Committee</b>	<b>AS representatives in the Council of Universities</b>
prof. Ing. arch. Alois Nový, CSc. Lenka Burgerová Mgr. Marcel Hádlík	doc. Ing. Eva Münsterová, CSc. – vice- chairperson of CoU, member of CoU presidium Mgr. Václav Božek, CSc. – BUT representative at the CoU Assembly František Drtil – Student Chamber of CoU Lenka Burgerová – Student Chamber of CoU (substitute representative)

### III – 2 SCIENTIFIC BOARD OF BUT IN 2003

Name	Position	Discipline
prof. Ing. RNDr. Jan Vrbka, DrSc.	Rector, BUT	Mechanics of solids
prof. Ing. Jiří Kazelle, CSc.	Vice-Rector, BUT	Electrical engineering and electronics
prof. RNDr. Josef Jančář, CSc.	Vice-Rector, BUT	Macromolecular chemistry
doc. RNDr. Miloslav Švec, CSc.	Vice-Rector, BUT	Applied physics
doc. Ing. Karel Rais, CSc., MBA	Vice-Rector, BUT	
prof. Ing. Vladimír Báleš, DrSc.	Rector, Slovak University of Technology	
prof. RNDr. Jaroslav Cihlár, CSc.	Faculty of Mechanical Engineering	Materials science
prof. Ing. Tomáš Čermák, CSc.	Rector, VŠB- TU Ostrava	
Ing. Miroslav Čermák, CSc.	Chairperson of Board of Directors of Stavoprojekta, a.s.	
Ing. Jiří Devát	General Director, Microsoft, s.r.o.	
Ing. Ivan Dobiáš, DrSc.	Institute of Thermomechanics, AS CR	Non-linear dynamic systems
prof. Ing. Rostislav Drochytka, CSc.	Vice-Dean, FCE, BUT	Construction materials engineering
prof. Ing. Jaroslav Fiala, CSc.	Dean, FC, BUT	
prof. Ing. Jan M. Honzík, CSc.	Vice-Dean, FIT, BUT	Information technologies
prof. Ing. Tomáš Hruška, CSc.	Dean, FIT, BUT	Information technologies
doc. Ing. Josef Chybík, CSc.	Dean, FA, BUT	Construction in architecture
doc. Ing. Miloš Koch	Dean, Faculty of Business Management	
prof. RNDr. Miroslav Liška, DrSc.	FME, BUT	Applied physics
prof. Ing. Miroslav Ludwig, CSc.	Rector, Pardubice University	
doc. RNDr. Petr Lukáš, CSc.	Director, Institute of Materials Physics, AS CR	
prof. Ing. Ladislav Musílek, CSc.	Vice-Rector, ČVUT, Prague	Experimental physics
prof. Ing. arch. Alois Nový, CSc.	Faculty of Architecture, BUT	Architecture
prof. Ing. Emanuel Ondráček, CSc.	Adviser to rector	Mechanics of solids, computer mechanics
prof. Ing. Petr Sába, CSc.	Rector, Tomáš Bata University Zlín	Materials engineering
prof. PhDr. Jan Sedlák, CSc.	Dean, Faculty of Fine Arts	Architecture
prof. RNDr. Eduard Schmidt, CSc.	Vice-Rector for R&D, MU Brno	Physics of solids
prof. Ing. Jana Stávková, CSc.	Vice-Rector, MZLU Brno	Statistics
Dr. Ing. Markus Steiner	Škoda Auto a.s.	Design technology and information science
prof. Ing. Jiří Stráský, CSc.	Faculty of Civil Engineering, BUT	Concrete structures
prof. RNDr. Václav Suchý, DrSc.	Rector, University of veterinary and Pharmaceutical Sciences, Brno	
prof. RNDr. Ing. Petr Štěpánek, CSc.	Dean, Faculty of Civil Engineering	
Ing. Dan Ťok, CSc.	General director, Jihomoravská plynárenská a.s.	Power engineering
doc. PhDr. Milan Uhde	Barvičova 59, 602 00 Brno	Theatrology
prof. Ing. Josef Vačkář, CSc.	Dean, FME of BUT	Manufacturing technology
prof. Ing. Petr Vavřín, DrSc.	Rector emeritus	Cybernetics, automation and measurement
plk.doc. Ing. František Vojkovský, CSc.	Rector, Military Academy, Brno	
prof. Ing. Radimír Vrba, DrSc.	Dean, FEEC, BUT	
prof. RNDr. Alexander Ženišek, DrSc.	FME, BUT	Mathematics, approximation and numerical methods

### III – 3 BOARD OF TRUSTEES OF BUT

Ing. Vladimír JEŘÁBEK, MBA		Chairperson
Ing. Richard KUBA, CSc.		Vice-Chairperson
PhDr. Martin PROFANT RNDr. Petr DUCHOŇ Ing. Jiří ŠKRLA	Ing. Václav PETŘÍČEK, CSc. Ing. Stanislav BĚLEHRÁDEK doc. Ing. Karel SELNER, CSc. Ing. Petr KARAS, CSc.	Ing. Helena ŠEBKOVÁ, CSc. doc. Ing. Jiří VOLF, CSc. Ing. Stanislav JURÁNEK

### IV – 1a NUMBERS OF ACCREDITED DEGREE PROGRAMMES AND SUBJECTS AT BUT

Subject groups	Core subject codes	Programmes/subjects			Students, total program./subjects
		Bachelor's	Master's	Doctoral	
Natural sciences	14	0	0	2/2	2/2
Technical sciences	23 to 39	9/26	15/60	16/29	40/115
Economics	62	2/2	1/2	1/1	4/5
Culture and the arts	82	1/7	1/7	0/0	2/14
BUT		12/35	17/69	19/32	48/136

### IV – 1b NUMBERS OF ACCREDITED DEGREE PROGRAMMES AND SUBJECTS BY FACULTIES

Faculty	Bachelor's		Master's		Doctoral		Total	
	programme	subjects	prog's	subj's	prog's	subj's	programmes	subjects
FCE	0	0	2	7	3	8	5	15
FME	2	9	2	36	8	8	12	53
FEEC	2	11	2	8	1	7	5	26
FIT	2	2	2	2	1	1	5	5
FC	2	3	6	6	4	5	12	14
FA	1	1	1	1	1	2	3	4
FFA	1	7	1	7	0	0	2	14
FBM	2	2	1	2	1	1	4	5
Total	12	35	17	69	19	32	48	136

### IV – 2a NUMBERS OF STUDENTS AT 31 OCTOBER 2003

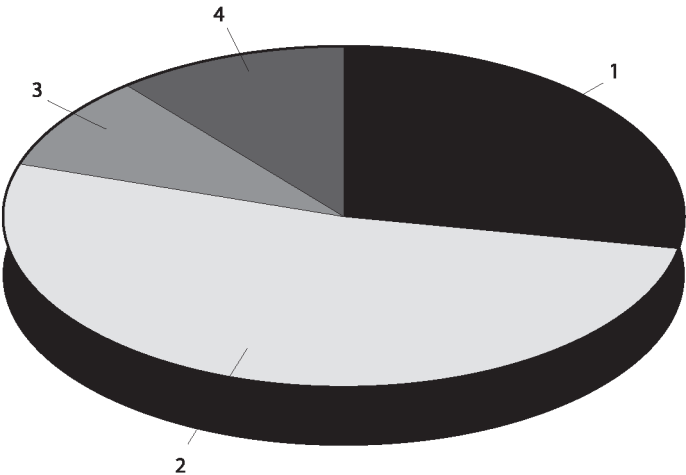
Subject groups	Core subject codes	Students per degree programme			Students, total
		Bachelor's	Master's	Doctoral	
Natural sciences	14	0	0	78	78

Technical sciences	23 to 39	4 107	9 774	1 679	15 560
Economics	62	594	953	116	1 663
Sciences of arts and culture	82	146	114	0	260
BUT		4 847	10 841	1 873	17 561

IV – 2b TOTAL NUMBER OF STUDENTS AT 31 OCTOBER 2003

Type of degree programme		Type of study			Total
		Full time	Distance	Combined	
Bc.	Bachelor's	4 511	0	336	4 847
Ing./Mgr.	Master's	8 837	6	397	9 240
Ing./Mgr.	Master's, follow-up	1 329	0	272	1 601
Ph.D.	Doctoral	947	118	808	1 873
total		15 624	124	1 813	17 561

Student Number in Bachelor's, Master's, and Doctor's degree programmes



1 – 28 % Bachelor's degree    2 – 52 % Master's degree.    3 – 9 % Master's, follow-up degree    4 – 11 % Doctoral degree

#### IV – 2c NUMBER OF STUDENTS BY FACULTIES

Faculty	Type of degree programmes			Total
	Bachelor's	Master's	Doctoral	
FCE	0	4 024	465	4 489
FME	1248	3 176	629	5 053
FEEC	1713	1222	353	3 288
FIT	699	529	103	1 331
FC	110	709	137	956
FA	337	114	70	521
FFA	146	114	0	260
FBM	594	953	116	1 663
total	4 847	10 841	1 873	17 561

#### IV – 2d NUMBERS OF STUDENTS IN INDIVIDUAL DEGREE PROGRAMMES

Facul.	Programme code and name	Men	Wom.	Type of study			Total
				Full-time	Combined	Distance	
FCE	M3607 / Civil Engineering	2911	851	3423	333	6	3762
	M3646 / Geodesy and Cartography	151	111	262	0	0	262
	P3607 / Civil Engineering	278	117	185	210	0	395
	P3646 / Geodesy and Cartography	12	3	10	5	0	15
	P3917 / Forensic Engineering	34	21	21	34	0	55
FME	B2341/ Mechanical Engineering	1061	89	845	305	0	1150
	B3901/Applied Sciences in Engineering	98	0	98	0	0	98
	M2301 / Mechanical Engineering	2619	213	2832	0	0	2832
	N2301 / Mechanical Engineering	321	23	290	54	0	344
	P2302 / Machines and Equipment	231	7	126	112	0	238
	P2303 / Manufacturing Technologies	75	27	43	59	0	102
	P3901/Applied Sciences in Engineering	89	5	44	50	0	94
	P3903/Cybernetics and Control Systems	25	2	3	24	0	27
	P3910/Physical & Materials Engineering	93	13	52	54	0	106
	P3913 / Application of Natural Sciences	28	7	18	17	0	35
	P3920 / Metrology and Assaying	5	5	9	1	0	10
	P3917 / Forensic Engineering	17	0	4	13	0	17



FEEC	B2612 / Electrical Eng. & Informatics	25	0	25	0	0	25
	B2643 / Electrical Eng., Electronics, Communications and Control Systems	1655	33	1688	0	0	1688
	M2612/Electrical Eng. & Informatics	1142	33	1175	0	0	1175
	N2612 / Electrical Eng.& Informatics	46	1	47	0	0	47
	P2643 / Electrical Eng., Electronics Communications and Control Systems	343	10	215	138	0	353
FIT	B2612 / Electrical Eng.& Informatics	14	0	14	0	0	14
	B2646 / Information Technologies	666	19	685	0	0	685
	M2612/Electrical Eng.& Informatics	499	14	513	0	0	513
	N2612 / Electrical Eng.& Informatics	16	0	16	0	0	16
	P2646 / Information Technologies	102	1	71	32	0	103
FC	B2801/Chemistry, Chem. Technologies	30	31	42	19	0	61
	B2901/Chemistry, Tech. of Foodstuffs	13	36	37	12	0	49
	M2805 / Chemistry and Technologies of the Environment Protection	83	104	166	21	0	187
	M2806 / Consumer Chemistry	35	80	109	6	0	115
	M2808 / Chemistry and Technology of Materials	86	45	124	7	0	131
	N2805 / Chemistry and Technologies of Environmental Protection	0	2	2	0	0	2
	M2901/Chemistry & Foodstuffs Technol.	61	202	233	30	0	263
	N2901 / Chemistry & Foodstuffs Technol.	0	11	8	3	0	11
	P1404 / Physical Chemistry	21	31	37	15	0	52
	P1405 / Macromolecular Chemistry	15	11	18	8	0	26
	P2805 / Chemistry and Technologies of Environmental Protection	14	24	13	25	0	38
	P3911 / Materials Science	15	6	10	11	0	21
FA	B3501 / Architecture & Town Planning	199	138	337	0	0	337
	N3501 / Architecture & Town Planning	70	44	114	0	0	114
	P3501 / Architecture & Town Planning	43	27	28	0	42	70
FFA	B8206 / Visual Arts	71	75	146	0	0	146
	N8206 / Visual Arts	56	58	114	0	0	114

FBM	B6208 / Economics and Management	271	294	565	0	0	565
	B6209/Systems Engineering&Informatics	28	1	29	0	0	29
	N6208 / Economics and Management	576	377	738	215	0	953
	P6208 / Economics and Management	77	39	40	0	76	116
BUT		14 320	3 241	15 624	1 813	124	17 561

#### IV – 3a STUDENT DROPOUT RATES

Subject groups	Core subjects code	Types of degree programmes			Students, total
		Bachelor's	Master's	Doctoral	
Natural sciences	14	0	0	0	0
Technical sciences	23 to 39	559	1 466	157	2 293
Economics	62	50	107	3	160
Sciences of culture and the arts	82	14	4	0	18
BUT		623	1 684	160	2 467

#### IV – 3b STUDENT DROPOUT RATES IN DEGREE PROGRAMMES AS OF 31. 10. 2003 (ENROLMENT FIGURES FROM 31/10/2002)

Fac.	Bachelor's			Master's			Doctoral			Total		
	enrolled	dropouts	%	enrolled	dropouts	%	enrolled	dropouts	%	enrolled	dropouts	%
FCE	0	0	-	3 831	911	23.78	429	44	10.26	4260	955	22.42
FME	947	211	22.28	2 939	436	14.83	586	56	9.56	4472	703	15.72
FEEC	852	225	26.41	1 620	108	6.67	326	41	12.58	2798	374	13.37
FIT	344	84	24.42	653	31	4.75	90	10	11.11	1087	125	11.5
FC	56	24	42.86	621	84	13.53	118	4	3.39	795	112	14.09
FA	318	15	4.72	196	3	1.53	54	2	3.70	568	20	3.52
FFA	171	14	8.19	84	4	4.76	0	0	-	255	18	7.06
FBM	522	50	9.58	885	107	12.09	98	3	3.06	1505	160	10.63
Total	3 210	623	19.41	10 829	1 684	15.55	1 701	160	9.40	15740	2467	15.67

#### IV – 4a NUMBERS OF GRADUATES

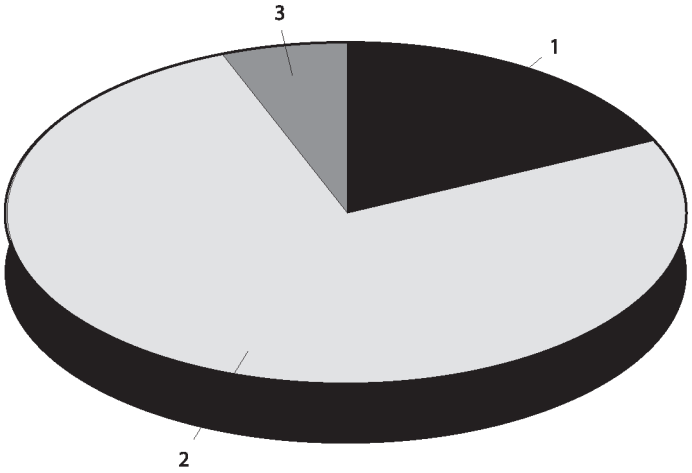
Group of subjects	Core subjects code	Students in degree programmes			Students, total
		Bachelor's	Master's	Doctoral	
Natural sciences	14	0	0	5	5
Technical sciences	23 to 39	269	1 568	130	1 967

Economics	62	133	283	12	428
Sciences of culture and the arts	82	45	24	0	69
BUT		447	1 875	142	2 464

IV – 4b NUMBER OF GRADUATES BY FACULTIES

Faculty	Type of degree programme			Total
	Bachelor's	Master's	Doctoral	
FCE	0	454	16	470
FME	200	505	57	762
FEEC	6	293	29	328
FIT	6	89	5	100
FA	50	128	8	186
FC	7	99	15	121
FBM	133	283	12	428
FFA	45	24	0	69
BUT	447	1 875	142	2 464

Graduates Structure by Degree Programmes



1 – 18 % Bachelor's    2 – 76 % Master's    3 – 6 % Doctoral

#### IV – 4c NUMBERS OF GRADUATES FROM INDIVIDUAL DEGREE PROGRAMMES

Faculty	Degree programme	Men	Women	international students	Total
FCE	M3607	309	107	3	416
	M3646	19	19	0	38
	P3607	12	4	0	16
<b>FCE, total</b>		340	130	3	470
FME	B2341	185	15	3	200
	M2301	412	35	3	447
	N2301	51	7	0	58
	P2302	17	3	2	20
	P2303	7	0	0	7
	P3901	12	0	0	12
	P3903	5	0	0	5
	P3910	3	1	0	4
	P3913	3	1	0	4
	P3917	4	0	1	4
	P3920	1	0	0	1
<b>FME, total</b>		700	62	9	762
FEEC	B2612	6	0	0	6
	M2612	267	6	6	273
	N2612	20	0	0	20
	P2643	27	2	5	29
<b>FEEC, total</b>		320	8	11	328
FIT	B2612	6	0	0	6
	M2612	85	2	1	87
	N2612	1	1	1	2
	P2646	5	0	1	5
<b>FIT, total</b>		97	3	3	100
FC	B2801	1	6	0	7
	M2805	13	16	0	29
	M2806	3	16	0	19
	M2808	14	9	0	23
	M2901	7	21	0	28
	P1404	1	0	0	1
	P1405	2	2	0	4
	P2805	3	5	0	8
	P3911	1	1	0	2
<b>FC, total</b>		45	76	0	121
FA	B3501	35	15	1	50
	N3501	82	46	0	128

	P3501	3	5	0	8
FA, total		120	66	1	186
FFA	B8206	22	23	2	45
	N8206	14	10	2	24
<b>FFA, total</b>		36	33	4	69
FBM	B6208	75	58	6	133
	N6208	139	144	7	283
	P6208	7	5	0	12
<b>FBM, total</b>		221	207	13	428
<b>BUT, total</b>		1879	585	44	2464

#### IV – 4d GRADUATES OF DOCTORAL PROGRAMMES AT BUT IN 2003

Facul.	Name	Title of thesis and name of supervisor
FCE	Ing. Tomáš Kulhavý	Constructions of the pre-stressed boom stiffened by external cables or arches. Supervised by prof. Ing. Jiří Stráský, CSc.
FCE	Ing. Robert Brož	Cable-stayed bridges. Supervised by prof. Ing. Jiří Stráský, CSc.
FCE	Ing. Jiří Kunt	Processing waste products of desulphurization and incineration. Supervised by prof. Ing. Rostislav Drochytka, CSc.
FCE	Ing. Andrea Chromá	Research into use of flue ash in the manufacture of blended cements. Supervised by doc. Ing. Marcela Fridrichová, CSc.
FCE	Ing. Petr Svadbík	Problems related to a concrete bridge deck of reinforced concrete composite bridges. Supervised by prof. Ing. Jiří Stráský, CSc.
FCE	Ing. Petr Hradil	Analysis of concrete space structures. Supervised by doc. Ing. Jaroslav Žák, CSc.
FCE	Ing. Miroslav Mátl	Analysis of reasons for the destruction of the „HURDIS“ ceiling system made up of ceramic CSD HURDIS II elements. Supervised by doc. Ing. Jiří Lank, CSc.
FCE	Ing. Olga Navrátilová	Modelling barn microclimates. Supervised by Ing. Günter Gebauer, CSc.
FCE	Ing. Ivo Kremláček	Conceptual model of precipitations and drainage and calibration based on genetic algorithms. Supervised by doc. Ing. Miloš Starý, CSc.
FCE	Ing. Vít Petránek	Protection of concrete structures by surface treatment methods based on the use of waste materials. Supervised by prof. Ing. Rostislav Drochytka, CSc.
FCE	Ing. Amos Dufka	Extension of cement composites service life by the use of waste materials. Supervised by prof. Ing. Rostislav Drochytka, CSc.
FCE	Ing. Radek Dohnal	Marketing surveys for strategic planning in a construction company. Supervised by doc. Ing. Bohumil Puchýř, CSc.
FCE	Ing. Jana Vražičová	Study into properties of a magnesium-phosphate binder. Supervised by doc. Ing. Pavla Rovnaníková, CSc.

FCE	Ing. Petr Lindovský	Strength characteristics and effects of glass-fibre members. Supervised by prof. Ing. Jindřich Melcher, DrSc.
FCE	Ing. Zbyněk Zachoval	The use of physical modelling in the development of methods for the design of local channel broadening or narrowing. Supervised by doc. Ing. Jaroslav Veselý, CSc.
FCE	Ing. Kateřina Hrazdilová Bočková	Management of projects related to the critical chain method of construction. Supervised by Ing. Leonora Marková, Ph.D.
FME	Ing. Petr Krejčí	Optimization of magnetic clutch characteristics and modelling of the clutch dynamic behaviour using artificial intelligence methods. Supervised by doc. Ing. Čestmír Ondrůšek, CSc.
FME	Ing. Alois Neudert	Uniform bentonite mixtures control optimization. Supervised by prof. Ing. Karel Rusín, DrSc.
FME	Ing. Jiří Hudec	Analysis of mechanical interaction between the prosthesis and the femure. Supervised by Ing. Zdeněk Florian, CSc.
FME	Ing. László Iván	The creation and application of a computation model for the strain/stress analysis of the total prosthesis of the hip joint. Supervised by prof. Ing. Přemysl Janíček, DrSc.
FME	Ing. Bronislav Foller	Ultrasound aided pultrusion. Supervised by doc. Ing. Karel Novotný, CSc.
FME	Ing. Radek Kalousek	Simulation of Processes in Non-contact Scanning Force Microscopy. Supervised by doc. Ing. Tomáš Šíkola, CSc.
FME	Ing. Jiří Pospíšil	Dispersion of automobile emissions in built-up areas in cities. Supervised by prof. Ing. Miroslav Jícha, CSc.
FME	Ing. Markéta Přerovská, roz. Střítecká	A study into a structure of continuously cast strips of Al alloys. Supervised by prof. Ing. Luděk Ptáček, CSc.
FME	Ing. Vlastimil Rábek	Optical methods for the detection of indistinct traces on road surfaces for the purpose of expert witness analysis of traffic accidents. Supervised by doc. Ing. Albert Bradáč, DrSc.
FME	Ing. Pavel Slaviček	Determination of thermophysical properties of molten fluoride salts with a special emphasis on acid potassium fluoride. Supervised by prof. Ing. Oldřich Matal, CSc.
FME	Ing. Nguyen Van Tuyen	Experimental and theoretical study of properties of the gas generated at biomass gasification in atmospheric fluidized bed. Supervised by doc. Ing. Ladislav Ochrana, CSc.
FME	Ing. Petr Blecha	Use of modern control and quality assurance methods for the construction of machining centres. Supervised by doc. Ing. Ivan Vavřík, CSc.
FME	Ing. Petr Bohatý	Effects of phase structure on stress/strain characteristics of polypropylene. Supervised by prof. RNDr. Bohumil Vlach, CSc.
FME	Ing. Aleš Dočkal	Design optimization of gearboxes with the aim at reducing noise emissions. Supervised by doc. Ing. Dušan Kolář, CSc.
FME	Ing. Roman Gröger	Characterization on fracture-mechanical behaviour of bimaterial V-notches using BEM. Supervised by prof. RNDr. Zdeněk Knésl, CSc.

FME	Ing. Daniel Hajduk	Computation modelling of the cross section and waviness of hot rolled flat work. Supervised by doc. Ing. Jindřich Petruška, CSc.
FME	Ing. Pavel Charvát	Interferometric research into submerged non-isothermal jets. Supervised by doc. Ing. Milan Pavelek, CSc.
FME	Ing. Jaroslav Jonák	Effects of passive tracking systems on airspace security. Supervised by prof. Ing. Dušan Kevický, CSc.
FME	Ing. Miroslav Jopek	Modelling of mechanical behaviour of steel at higher rates of deformation. Supervised by prof. Ing. Milan Forejt, CSc.
FME	Ing. Petr Kejda	Study of factors influencing rolling contacts durability. Supervised by doc. Ing. Dušan Kolář, CSc.
FME	Ing. Robert Kledus	Vehicle movement modelling in the traffic accidents analysis – course changing manoeuvres. Supervised by prof. Ing. František Vlk, DrSc.
FME	Ing. Petr Koška	Reliability aspects in the risk analysis of the compliance assessment process. Supervised by doc. Ing. Alois Fiala, CSc.
FME	Ing. Petr Kratochvíl	New approaches to the diagnostics of materials in insulation systems. Supervised by doc. Ing. Miloš Hammer, CSc.
FME	Ing. František Kropáč	Problems involved in expert witness assessments of collisions between pedestrians and vehicles in low visibility situations. Supervised by doc. Ing. Albert Bradáč, DrSc.
FME	Ing. Ludvík Láníček	Numerical model for a new type of a counter-current burner with a considerable tangential flow. Supervised by prof. Ing. Miroslav Jícha, CSc.
FME	Ing. Tamara Mazlová	On the implementation of PDM systems in industrial enterprises. Supervised by doc. Ing. Josef Šupák, CSc.
FME	Ing. Stanislav Patočka	Research in the state of the environment with local exhausting. Supervised by doc. Ing. Eva Janotková, CSc.
FME	Ing. Zdeněk Píša	Exchange of data among CAD systems. Supervised by Ing. Pavel Mazal, CSc.
FME	Ing. Stanislav Průša	Development of ToF LEIS spectrometer for the study of surfaces and thin layers. Supervised by doc. RNDr. Tomáš Šikola, CSc.
FME	Ing. Pavel Pustina	Possibilities for the determination of the vehicle collision velocity for purposes of expert witness analysis of accidents involving pedestrians. Supervised by doc. Ing. Albert Bradáč, DrSc.
FME	Ing. Dana Rubínová	Methodology for including ergonomic aspects to new designs. Supervised by doc. Ing. arch. Jan Rajlich.
FME	Ing. Dagmar Rychlíková roz. Doskočilová	Identification and assessment of risks involved in transport and storage of oil. Supervised by prof. Ing. František Babinec, CSc.
FME	Mgr. Karel Slaviček	Fuzzy probability analysis. Supervised by doc. RNDr. Zdeněk Karpíšek, CSc.
FME	Ing. Ladislav Stach	Draft of an integrated information system for the air traffic control. Supervised by prof. Ing. Ludvík Kulčák, CSc.
FME	Ing. Petr Strážnický	Comprehensive security study of an LPG storage facility. Supervised by prof. Ing. František Babinec, CSc.
FME	Ing. Jiří Šálek	Optimization of the condensation node of overhead product of vacuum distillation. Supervised by prof. Ing. Josef Kohoutek, CSc.

FME	Ing. Pavel Šimeček	Computation modelling of mechanical properties of formed and subsequently heat processed bodies. Supervised by doc. Ing. Jindřich Petruška, CSc.
FME	Ing. Marek Štroner	A system for evaluation and rationalization of logistic processes. Supervised by prof. Ing. Bohumil Hlavenka, CSc.
FME	Ing. Jiří Šuta	Prediction of ruptures in metals during shaping. Supervised by doc. Ing. Jindřich Petruška, CSc.
FME	Ing. Zdeněk Růžička	Research into effects of the tool material on physical and mechanical properties of polymers. Supervised by doc. Ing. Imrich Lukovics, CSc.
FME	Ing. Stanislav Seifl	Two-parameter fracture mechanics: behaviour of short fatigue cracks. Supervised by prof. RNDr. Zdeněk Knésl, CSc.
FME	Ing. Bohumír Strnad	2D solution of aerodynamic characteristics of high-lift devices using a panel method of the 2nd order. Supervised by prof. Ing. Karol Fi'lakovský, CSc.
FME	Ing. Milan Baroš	On the diagnostics of insulation materials. Supervised by doc. Ing. Miloš Hammer, CSc.
FME	Ing. Domingos Filipe LIPI	Comprehensive study of safe manufacture of nitric acid ( $\text{HNO}_3$ ). Supervised by prof. Ing. František Babinec, CSc.
FME	Ing. Martin Halva	Software quality modelling for control systems. Supervised by doc. Ing. Branislav Lacko, CSc.
FME	Ing. Petr Bláha	Monitoring of differences between project schedules and their implementation. Supervised by doc. RNDr. Jindřich Klapka, CSc.
FME	Ing. Petr Majer	Modern methods of production scheduling. Supervised by RNDr. Jiří Dvořák, CSc.
FME	Ing. Antonín Joch	Development of metallic materials with extended service life for glass processing machines. Supervised by prof. Ing. Karel Rusín, DrSc.
FME	Ing. Petr Jedlička	Future laser for the PALS. Supervised by doc. Ing. Ivan Švarc, CSc.
FME	Ing. Petr Palubják	Multicommodity network flows. Supervised by doc. Ing. Miloš Šeda, Ph.D.
FME	Ing. Jan Dujka	Costs prediction for projects of automated control systems. Supervised by doc. Ing. Branislav Lacko,
FME	Ing. Marek Nikodým	An example of a non-elliptic system in 3D space. Supervised by doc. RNDr. Josef Daněček, CSc.
FME	Ing. Luděk Nechvátal	Homogenization of problems with uncertainties in coefficients. Supervised by doc. RNDr. Jan Franců, CSc.
FME	Mgr. Jitka Saibertová	Purely multidimensional method of finite volumes for systems of principles of conservation. Supervised by prof. Dr. Mária Lukáčová
FME	Ing. Tomáš Profant	Interaction between microcracks and particles of the second phase. Supervised by prof. RNDr. Michal Kotoul, DrSc.
FME	Ing. Zdeněk Franc	A hysteretic model of a centrifugal pump. Supervised by doc. RNDr. Ing. Josef Nevrlý, CSc.
FME	Ing. Vítězslav Svoboda	Quantitative and qualitative evaluation of the measuring tools quality. Supervised by prof. Ing. Josef Vačkář, CSc.



FEEC	Ing. Jiří Vaněk	The use of transport and noise characteristics for the testing of photovoltaic cells. Supervised by prof. Ing. Jiří Kazelle, CSc.
FEEC	Ing. Mohammad Reza Azizian	A Sensorless Control Technique for Brushless DC Motor Drives Using a Frequency-Independent Phase Shifter. Supervised by prof. Ing. Jiří Skalický, CSc.
FEEC	Ing. Ivan Koudar	New active elements in the current mode. Supervised by prof. Ing. Kamil Vrba, CSc.
FEEC	Ing. Libor Šácha	Effects of down-pressure on the properties of negative electrodes of lead batteries. Supervised by doc. Ing. Milan Calábek, CSc.
FEEC	Ing. Jiří Dofek	Software development tools for signal processors. Supervised by prof. Ing. Zdeněk Smékal, CSc.
FEEC	Ing. Abdalla Ali Suleiman	On Analysis and Evaluation of PMSM Speed Control, Sensor and Sensorless. Supervised by doc. Ing. Zdeněk Malec, CSc.
FEEC	Ing. Saad Alamin Mohamed Ragab	On analysis of dynamic states of electric drives with three-phase stepping motors. Supervised by doc. Ing. Josef Kolář, CSc.
FEEC	Ing. Soňa Šedivá	Optimization of parameters of multiport averaging probe. Supervised by doc. Ing. Ludvík Bejček, CSc.
FEEC	Ing. Josef Barák	Electric arc plasma radiation. Supervised by doc. RNDr. Vladimír Aubrecht, CSc.
FEEC	Ing. Moustafa El Ghannam	Analysis of optical nonlinear diplexers. Supervised by prof. Ing. Libor Dědek, CSc.
FEEC	Ing. Pavel Filip	Use of artificial intelligence methods for the optimization of the design of electric machines. Supervised by doc. Ing. Čestmír Ondrůšek, CSc.
FEEC	Ing. Jaromír Hubálek	Chemical Sensors - Precise Conductivity Measurements Using Planar Electrodes. Supervised by Ing. Vladimír Kolařík, Ph.D.
FEEC	Ing. Roman Samek	Study of dynamic phenomena in electric arc blowout in $SF_6$ . Supervised by doc. Ing. Zdeněk Vávra, CSc.
FEEC	Ing. Abdala Radwan	Point-to-Multipoint Data Transmission Using Short-Range Radio Communication. Supervised by Ing. Ivo Herman, CSc.
FEEC	Ing. Miroslav Balík	Structures for acoustic room simulations. Supervised by prof. Ing. Kamil Vrba, CSc.
FEEC	Ing. Václav Zeman	Frequency filters with transimpedance amplifiers and current conveyors. Supervised by prof. Ing. Kamil Vrba, CSc.
FEEC	Ing. Vilém Řezníček	Use of operational research for the identification of the optimum transmission paths. Supervised by Ing. Vladislav Škorpil, CSc.
FEEC	Ing. Lukáš Matějčík	General sensitivity analysis of frequency filters. Supervised by prof. Ing. Kamil Vrba, CSc.
FEEC	Ing. Pavel Šilhavý	Polytonal modulations for ADSL and VDSL transmission technologies. Supervised by prof. Ing. Kamil Vrba, CSc.
FEEC	Ing. Dan Komosný	Integration of trunked networks and IP protocol networks. Supervised by Ing. Ivo Herman, CSc.

FEEC	Ing. Jana Bardoňová	Biosignals classification using the temporal axis warping and hidden Markov models. Supervised by doc. Ing. Ivo Provazník, Ph.D.
FEEC	Ing. Daniel Kula	Optimum Subband Coding of Cyclostationary Signals with Maximally Decimated Filter Banks. Supervised by prof. Ing. Jiří Svačina, CSc.
FEEC	Ing. Martin Pištěk	Research into effects of transmission channel properties on the image signal. Supervised by prof. Ing. Václav Říčný, CSc.
FEEC	Ing. Abdulhakim Abuzabu Mohamed	Digital Audio Compression. Supervised by Ing. Václav Škorpil, CSc.
FEEC	Ing. Jiří Poruba	Separation of the speech signal from noise environment. Supervised by prof. Ing. Zdeněk Smékal, CSc.
FEEC	Ing. Petr Krupanský	Options for the use of neuron networks in control applications. Supervised by prof. Ing. Petr Pivoňka, CSc.
FEEC	Ing. Petr Grätz	Visualization of acoustic fields by means of acoustic holography. Supervised by doc Ing. Ludvík Bejček, CSc.
FEEC	Ing. Jiří Večerka	Modelling the dynamic behaviour of a synchronous machine. Supervised by doc. Ing. Čestmír Ondrůšek, CSc.
FIT	Ing. Jiří Očenášek	Parallel Estimation of Distribution Algorithms. Supervised by Ing. Josef Švarc, CSc.
FIT	Ing. Zdeněk Korčák	Signature files with variable length signatures. Supervised by doc. Ing. Jaroslav Zendulka, CSc.
FIT	Ing. Azeddien M. Sllame	Design Space Exploration of High-Performance Digital System. Supervised by doc. Ing. Vladimír Drábek, CSc.
FIT	Ing. Petr Kotásek	DMSL: The Data Mining Specification Language. Supervised by doc. Ing. Jaroslav Zendulka, CSc.
FIT	Ing. Petr Motlíček	Modelling of Spectra and Temporal Trajectories in Speech Processing. Supervised by doc. Dr. Ing. Jan Černocký
FA	Ing. Martina Marušková	Natural environment and landscapes in town planning. Supervised by doc. Ing. arch. Jan Koutný, CSc.
FA	Ing. arch. Dita Váňová	Rehabilitation and remodelling of a set of prefab buildings. Supervised by doc. Ing. arch. Eva Vodičková, CSc.
FA	Ing. arch. Maxmilián Wittmann	Town-planning measures in flood prevention. Supervised by doc. Ing. arch. Miloslav Konvička, CSc.
FA	Ing. arch. Aleš Navrátil	The role of drawing in the training of architects. Supervised by doc. Ing. arch. Zdeněk Makovský
FA	Ing. arch. Zlata Talandová	Council housing – the first housing option for the young. Supervised by doc. Ing. arch. Dagmar Glosová, CSc.
FA	Ing. Ivan Fencel	Coordination of local planning and transport in city regions. Supervised by doc. Ing. arch. Jan Koutný, CSc.
FA	RNDr. Hana Koutná	Modern technologies for the presentation of 3D models on the Internet. Supervised by doc. Ing. Jan Viktorin, CSc.

FA	Ing. Jitka Brabcová	Presentation, promotion and popularization of cultural heritage: . Supervised by doc. Ing. arch. Miloslav Konvička, CSc.
FC	Ing. Petr Fleissig	A system for the prevention of, and response to, accidents and particularly industrial emergencies. Supervised by doc. Ing. Ivan Mašek , CSc.
FC	Mgr. Radek Příkryl	Silicium-based plasma polymers. Supervised by doc. RNDr. Jaroslav Čech, Ph.D.
FC	Mgr. Martin Vík	The structure and characteristics of 2-cuccinanhydride-1-octadecenu layers deposited on the glass and silica surfaces. Supervised by prof. RNDr. Josef Jančář, CSc.
FC	Mgr. Petra Šimková	Surface modification of flax fibres. Supervised by prof. RNDr. Josef Jančář, CSc.
FC	Ing. Josef Trčka	Effects of external conditions on the stability and properties of anticorrosive metallic coatings on steel. Supervised by prof. Ing. Jaroslav Fiala, CSc.
FC	Ing. Hana Drnovská	Immobilized layers on the basis of hyaluronic acid : Their preparation and characterization. Supervised by prof. Ing. Lubomír Lapčík, CSc.
FC	Ing. Bronislav Slovák	Study of possibilities for the regulation of microbial production of secondary metabolites. Supervised by RNDr. Ivana Márová, CSc.
FC	Ing. Michaela Raková	Study of selected natural antioxidants in foodstuffs. Supervised by RNDr. Ivana Márová, CSc.
FC	Ing. Radka Buňková	Study of antimutagenic properties of some selected natural substances. Supervised by RNDr. Ivana Márová, CSc.
FC	RNDr. Milena Vespalcová	Determination of substitute sweeteners in foodstuffs. Supervised by doc. Ing. Miroslav Fišera, CSc.
FC	Mgr. Dana Vránová	Determination of animal and plant biopolymers in foodstuffs. Supervised by doc. Ing. Miroslav Fišera, CSc.
FC	Ing. Eva Vítová	Assessment of the production of volatile sensory-effective substances of microbial metabolites and their characterization. Supervised by prof. Ing. Pavel Březina, CSc.
FC	RNDr. Karel Picka	Phototoxicity of aromatic nitrocompounds and products of their biotransformation. Supervised by prof. RNDr. Zdeněk Friedl, CSc.
FC	Ing. Daniela Kramářová	Possibilities for the use of biopolymers as components in the 4th generation binders. Supervised by prof. Ing. Jiří Brandštetr, DrSc.
FC	Ing. Jiří Kučerík	Study of Lignite Humic Acids. Supervised by doc. Ing. Miloslav Pekař, CSc.
FBM	Ing. Miroslav Dohnal	Computer aided prediction as a sub-problem in investment decisions. Supervised by doc. Ing. Miloslav Keřkovský, CSc., MBA
FBM	Ing. et Ing. Renáta Myšková	Effects of labour performance on corporate effectiveness. Supervised by doc. Ing. Miroslav Buchta, CSc.
FBM	PhDr. Iveta Šimberová	Principles of the marketing concept of total customer satisfaction (TCS) and their use in the company development. Supervised by doc. Ing. Vladimír Chalupský, CSc., MBA
FBM	Ing. Zdeněk Brodský	Efficiency of promotion activities in industrial companies. Supervised by doc. Ing. Miroslav Buchta, CSc.

FBM	Mgr. Jana Markesová	Effects of business ethics on the financial performance of small and medium-size undertakings. Supervised by doc. Ing. Mirko Dohnal, DrSc.
FBM	Ing. Vojtěch Bartoš	Balanced Scorecard as a tool for strategic controlling in manufacturing companies. Supervised by doc. ing. Jan Solař, CSc.
FBM	Ing. Alena Klapalová	Transformation of the Czech accounting system to suit the legislation effective in the European Union. Supervised by doc. Ing. Vladimír Chalupský, CSc., MBA
FBM	Ing. Pavla Břečková	Internationalization of small and medium-sized undertakings in the context of the entry of the Czech Republic into the EU. Supervised by prof. Ing. Petr Němeček, DrSc.
FBM	Ing. Jindřich Dušek	Managing strategic changes in companies. Supervised by doc. Ing. František Bartes, CSc.
FBM	Ing. Kamil Švéda	Microeconomic Theory, Czech and Japanese Early Adopters and High Technology Products: Measurement of Preferences. Supervised by doc. Ing. Miloslav Keřkovský, CSc., MBA
FBM	Ing. Vlastimil Veselý, MBA	Internet information services for the development of business communities. Supervised by doc. Ing. Vladimír Chalupský, CSc., MBA
FBM	Ing. Marek Zinecker	Credit strategies of a company in the context of long-term export financing. Supervised by doc. Ing. Luděk Mikulec, CSc.

#### IV – 5a APPLICATIONS FOR STUDY IN THE ACADEMIC YEAR 2003/2004

Group of subjects	Core subjects code	Applications submitted	Enrolled	Matriculated
Natural sciences	14	26	26	24
Technical sciences	23 to 39	12 348	7 124	5 672
Economics	62	2 463	871	803
Sciences of culture and the arts	82	519	52	52
BUT		15 356	8 073	6 551

#### IV – 5b NUMBER OF APPLICATIONS SUBMITTED, APPLICANTS ENROLLED AND MATRICULATED BY FACULTIES

Facul.	Bc.			Master's			Ph.D.		
	applications	enrolled	matriculated	applications	enrolled	matriculated	applications	enrolled	matriculated
FCE	0	0	0	3 429	1 585	1 432	150	129	129
FME	1 066	739	635	2 012	1 542	1 056	197	148	144
FEEC	2 288	1 510	1 107	17	10	10	124	94	94

FA	436	88	81	47	47	47	31	26	26
FC	194	117	95	599	410	325	32	32	30
FBM	1 484	319	311	942	518	460	37	34	32
FFA	496	36	36	23	16	16	0	0	0
FIT	1 700	635	448	18	9	8	34	29	29
BUT	7 664	3 444	2 713	7 087	4 137	3 354	605	492	484

#### IV – 6 LIFE-LONG LEARNING PROGRAMMES (2003 STATISTICS)

Faculty/dept.	Programmes	Lessons, total	Participants, total
FCE	19	1 121	888
FFA	1	416	4
FEEC	15	585	120
FC	-	-	-
FIT	-	-	-
FBM	7	2 089	620
FME	17	2 218	329
CEC	39	1 835	1228
CESA	16	838	250
IoFE	5	992	378
Total	119	10 194	3 189

#### IV – 7 BUT INVOLVEMENT IN DEVELOPMENT PROGRAMMES IN 2003 (in thousands of czk)

Name	Author	Funding
• Bachelor's degree programme "Electrical eng., electronics, communications and control systems"		
	doc. Jura - FEEC	16494
• Information technologies – three-year Bc. programme	prof. Honzík - FIT	7000
• Corporate finance and commerce, combined study	doc. Režňáková - FBM	1125
• Management of manufacturing processes	doc. Režňáková - FBM	600
• Creation of a new subject „Mechatronics“ for the Bachelor's degree programme "Mechanical engineering"		
	prof. Kratochvíl - FME	506
• Bachelor's degree programme "Mechanical engineering", in cooperation with regional higher vocational schools, combined study		
	doc. Doupovec - FME	500

• European Union – res publica	Ing. Janíček - CEC	89
• U3A (University of Third Age)	prof. Vavřín	460
• Development of regional post-secondary education in cooperation with Higher Vocational School	prof. Liška – FME	979
• Creation and further extension of structured programme “Civil engineering” and “Geodesis and cartography”, a combined type of study	Ing. Čupr - FCE	419
• Crisis management and protection of population	doc. Mašek - FC	500
• Creating study support programmes for distance study	doc. Doupovec - FME	1400
• Introduction of a new area of study „Technical applied ecology” for the Bachelor’s degree programme “Mechanical engineering”	prof. Stehlík - FME	506
• Creating conditions for integration of selected degree programmes of the FA and FCE of BUT	doc. Glosová - FA	350
• Life-long education support programmes	doc. Raida - FEEC	870
• U3A	prof. Vavřín	557
• Reimbursement of travel expenses	Ing. Svoboda, RO	60
• Comprehensive integration of physically handicapped students into the study at BUT	doc. Švec – FCE	1200
• Introduction of information and communication technologies to the BUT education programmes	Ing. Marušinec - CISC	11500
• Rehabilitation and development of the University Information System	Ing. Marušinec - CISC	6500
• Monitoring system	Ing. Otevřel - RO	3500
• Reconstruction of the gas boiler room	Ing. Otevřel - RO	1940
• Installation of thermostatic valves	Ing. Otevřel - RO	2000
• Information in business	doc. Režňáková - FBM	300
• Support to international mobility of students	prof. Kazelle	1620

Note: RO = Rector’s Office

## IV – 8 BUT PARTICIPATION IN HIGHER EDUCATION DEVELOPMENT FUND PROGRAMMES

Higher Education Development Fund	Projects approved	Funding allocated (in thousands CZK)		
		Investment	Non-investment	Total
FCE	8	6 271	772	7 043
FME	11	3 444	1 587	5 031

FEEC	88	9 409	14 109	23 518
FA	14	0	1 351	1 351
FBM	2	508	96	604
FC	19	2 974	1 788	4 762
FFA	8	568	3 045	3 613
FIT	10	0	1 068	1 068
CŠV	1	2 808	0	2 808
total	161	25 982	23 816	49 798

#### IV – 9 PRIZES AWARDED TO STUDENTS AND GRADUATES IN 2003

##### Rector's Prize to the Best Graduates

FCE	Ing. David Kmošek
FME	Ing. František Brož
FEEC	Ing. Jiří Valenta
FC	Ing. Daniela Šmejkalová
FBM	Ing. Jiří Kučera
FFA	MgA. Alena Pátková

##### Rector's Prize on the occasion of the 100th anniversary of BUT

<i>To students of BUT Bachelor's and Master's degree programmes for their outstanding results in study and other important activities promoting science and BUT</i>	FA	Ing. Tomáš Pína
	FBM	Ing. Ladislav Sekerka
	FIT	Ing. Roman Lukáš
<i>To students of BUT Doctoral degree programmes for their outstanding results in research education, contributions to science development and activities promoting BUT</i>	FCE	Ing. Pavel Kocanda
	FME	Ing. Roman Gröger
<i>To young teachers up to 35 years of age for outstanding results in teaching and research</i>	FC	Ing. Martin Weiter, Ph.D.
	FIT	doc. Dr. Ing. Jan Černocký

##### Josef Hlávka Prize

FCE	Ing. Dana Kupová
FME	Ing. Tomáš Pospíšil
FEEC	Ing. Martin Kravka
FC	Ing. Martin Malíček
FIT	Ing. Lukáš Sekanina, Ph.D.

##### Siemens 2003 Prize

FEEC	Ing. Tomáš Sutorý
FIT	Ing. Lukáš Sekanina
	Ing. Vladimír Kutálek
	Ing. Daniel Mika

PRECIOSA Foundation Prize		
	FCE	Ing. Miroslav Vořechovský
		Ing. Petr Frantík
	FME	Ing. Pavel Bareš
		František Brož
		Ing. Vladimír Čech
		Ing. Jan Čechal
		Jiří Červenka
		Jiří Fiala
		Ing. Robert Grepl
		Karel Houdek
		Ing. Jaroslav Kašpárek
		Ing. Petr Kostelník
		Ing. Přemysl Pokorný
		Tomáš Pospíšil
		Ing. Jiří Vais
		Radim Velecký
		Jan Zámečník
		Bronislav Zlámal
	FEEC	Ing. Jana Bardoňová
		Ing. Petr Grätz
		Ing. Radovan Jiřík
		Ing. Lukáš Matějčíček
		Petra Mostecká
		Ing. Vilém Neděla
		Ing. Michal Olšák
		Ivo Prášil
	FIT	Ing. Martin Heckel
	FC	Ing. Lucie Houdková
		Ing. Jiří Pryček
	FBM	Ing. Ladoslav Vondrák

**V – 1 DOMESTIC PROGRAMMES AND PROJECTS: PROJECTS ACCEPTED / FUNDING ALLOCATED (IN THOUSANDS OF CZK)**

Faculty	HEDF	GA CR	MoE-LP	MoE-LI	MoE-1K	Total
FCE*	8	41	0	0	0	49
	7 043	17 109				24 152



FME	11	50	1	0	0	62
	5 031	16 542	230			21 803
FEEC	88	57	0	1	2	148
	23 518	25 702		1 734	380	51 334
FA	14	4	0	0	0	18
	1 351	1 400				2 751
FBM	2	6	0	0	0	8
	604	1 304				1 908
FC	19	7	0	0	0	26
	4 762	2 362				7 124
FFA	8	0	0	0	0	8
	3 613					3 613
FIT	10	11	0	0	0	21
	1 068	3 998				5 066
UWS	1	0	0	0	0	1
	2 808					2 808
Total	161	176	1	1	2	341
	49 798	68 417	230	1 734	380	120 559

\* number of projects accepted / funding allocated in CZK)

UWS –University-Wide Services

HEDF – Higher Education Development Fund

GA CR – Grant Agency of the Czech Republic

MoE-LP - Providing access to R&D results for the Czech Republic

MoE-LI - Information sources for R&D

MoE-1K- Support to new researchers

## V – 2 DOMESTIC PROGRAMMES AND PROJECTS FUNDED BY MINISTRIES OTHER THAN MOE – NUMBER OF PROJECTS / PROJECTS ACCEPTED

Faculty	GA AV CR	MPO	MDS	MZD	NBÚ	Total
FCE *	0	4	1	0	0	5
		2 876	100			2 976
FME	1	21	0	1	0	23
	44	38 310		128		38 482
FEEC	8	15	0	0	1	24
	1 676	5 852			376	7 904
Total	9	40	1	1	1	52
	1 720	47 038	100	128	376	49 362

\* number of projects / funding in CZK)

UWS – University-Wide Services

GA AS CR - Grant Agency of the Academy of Sciences, Czech Republic

MoIT - Ministry of Industry and Trade

MoTC – Ministry of Transport and Communications

MoH - Ministry of Health

NSB – National Security Bureau

### V – 3 LONG-TERM RESEARCH PLANS (in thousands of czk)

Faculty	Number of projects	Funding allocated (based on agreement with MoE)		
		investment	non-investment	total
FCE	4	4 055	24 729	28 784
FME	6	19 000	34 164	53 164
FEEC	4	4 594	23 417	28 011
FA	1	1 837	1 502	3 339
FBM	2	400	4 150	4 550
FC	2	1 600	4 790	6 390
FIT	1	1 026	5 820	6 846
Total	20	32 512	98 572	131 084

Note: The Czech Ministry of Education (MoE) accepted two new research plans (from FEK and FME) funded from 2002

### V – 4 “RESEARCH CENTRES” PROJECTS (in thousands of czk)

Faculty	Centre's name	Author	Allocated funding (based on an agreement with the MoE)			Organized by
			Investment	Non-inves't	Total	
FME	Aviation and Space Research Centre	Píštěk Antonín, prof. Ing. CSc.	10 500	21 769	32 269	BUT
Total			10 500	21 769	32 269	
FME	Mechanical Engineering and Technology Centre	Kolíbal Zdeněk, doc. Ing. CSc.	1 700	5 925	5 925	ČVUT Prague
FEEC	Research Centre of Applied Cybernetics	Vavřín Petr, prof. Ing. DrSc.	489	4 273	4 273	ČVUT Prague
Total			2 189	10 198	10 198	

## V – 5 ASSOCIATE PROFESSORSHIP APPOINTMENTS AT BUT IN 2003

Facul.	Name	Discipline	Date
FCE	Hela Rudolf, Ing. CSc.	physical and construction materials engineering	1/16/03
FBM	Putnová Anna, RNDr. Ph.D.	branch economics and management	2/4/03
FC	Salyk Ota, Ing. CSc.	materials engineering	2/4/03
FA	Koutný Jan, doc. Ing. arch.CSc.	town-planning	3/1/03
FEEC	Blažek Vladimír, Ing. CSc.	heavy current and power engineering	4/8/03
FME	Kureš Miroslav, Mgr. Dr.	applied mathematics	4/24/03
FIT	Černocký Jan, Ing. Dr.	computer technologies and informatics	6/10/03
FIT	Schwarz Josef, Ing. CSc.	computer technologies and informatics	6/10/03
FCE	Tuza Karel, Ing. CSc.	theory and design of constructions	6/17/03
FME	Březina Tomáš, RNDr. Ing. CSc.	applied mechanics	6/24/03
FEEC	Šolc František, doc. Ing. CSc.	technical cybernetics	6/24/03
FCE	Kala Zdeněk, Ing. dr.	theory and design of constructions	7/1/03
FA	Šilhánková Vladimíra, Ing. arch. Ph.D.	town-planning	9/2/03
FME	Martišek Dalibor, PaedDr. Ph.D.	applied mathematics	10/9/03
FME	Ponížil Petr, RNDr. Ph.D.	materials sciences and engineering	10/9/03
FIT	Hanáček Petr, Ing. Dr.	computer technologies and informatics	11/21/03
FIT	Sklenář Jaroslav, doc. Ing. CSc.	computer technologies and informatics	11/21/03

## V – 6 FULL PROFESSORSHIP APPOINTMENTS AT BUT IN 2003

Faculty *	Name	Discipline	Date
FCE	Chobola Zdeněk, doc. RNDr.,CSc.	physical and construct. materials engineering	5/1/03
FCE	Novák Drahomír, doc. Ing. DrSc.	theory and design of constructions	5/1/03
FCE	Bradáč Albert, doc. Ing. DrSc.	forensic engineering	11/10/03
FME	Kotoul Michal, doc. RNDr. DrSc.	applied mechanics	5/1/03
FME	Lapčík Lubomír, doc. Ing. CSc.	materials sciences and engineering	5/1/03
	<i>(currently at the Faculty of Technology of Tomas Bata University at Zlín)</i>		
FME	Čech Jaroslav, doc. Ing. CSc.	mechanical engineering technologies	11/10/03
FEEC	Raida Zbyněk, doc. Dr. Ing.	electronics & communication engineering	11/10/03
FA	Nový Alois, doc. Ing. arch. CSc.	architecture	5/1/03
FA	Šindlar Jiljí, doc. Ing. arch., CSc.	architecture	11/10/03
FC	Vávrová Milada, doc. RNDr. CSc.	chem. and technol. of environment protection	11/10/03
	<i>(currently at the Faculty of Veterinary Hygiene and Ecology of University of Veterinary and Pharmaceutical Sciences Brno)</i>		

\* proposal submitted by the Faculty

## V – 7 GOLD MEDALS OF BUT AWARDED IN 2003

<b>prof. Ing. Jiří Jan, CSc.</b>	<b>11/18/03</b>
Professor, Faculty of Electrical Engineering and Communication Technologies for his role in the development of BUT and significant contribution to biomedical engineering	
<b>doc. Ing. arch. Dagmar Glosová, CSc.</b>	<b>11/18/03</b>
Associate professor, Faculty of Architecture for her role in the development of BUT and its Faculty of Architecture	
<b>doc. Ing. Eva Münsterová, CSc.</b>	<b>11/18/03</b>
Associate professor, Faculty of Mechanical Engineering for her role in the development of BUT and significant contribution to the development of higher education	

## V – 8 BUT INVOLVEMENT IN RESEARCH AND DEVELOPMENT PROGRAMMES

### National programmes

Programmes	1K	LN*	LP	LI	MSM
Number of projects	2	3	1	1	20
Funding allocated	380	42 467	230	1 734	131 084

\* two projects of a co-organizer

### International programmes

Programmes	OE	OC	OK	LA	ME
Number of projects	8	17	19	4	7
Funding allocated	4 805	7 117	20 789	456	2 088

### Other programmes

Programmes	GA CR	GA AS CR	Internal programmes	from other ministries	Others
Number of projects	176	9	57	42	1
Funding allocated	68 417	1 720	800	47 266	376

1K – Support to new researchers

LN Research centres

LP Providing access to R&D results

LI Information sources for R&D

MSM – Long-term R&D programmes

OE Eureka

OC Cost

OK 5th Framework programme

LA Ingo

ME Kontakt

## V – 8a INTERNATIONAL PROGRAMMES (PUBLIC TENDER OF THE MOE)

Programme		OC	OE	OK	ME	LA
FCE	number of projects					
	funding (in 000's CZK)					
FME	number of projects	13	7		3	2
	funding (in 000's CZK)	5 279	3 030		943	345
FEEC	number of projects	2	1		3	1
	funding (in 000's CZK)	747	1 775		545	40
FIT	number of projects			1		
	funding (in 000's CZK)			241		
FA	number of projects					1
	funding (in 000's CZK)					71
FC	number of projects	2			1	
	funding (in 000's CZK)	1 100			600	
FBM	number of projects					
	funding (in 000's CZK)					
CŠP	number of projects			1		
	funding (in 000's CZK)			670		
Number of projects, total		17	8	2	7	4
Funding, total (in thousands of CZK)		7 128	4 805	911	2 088	456
OC – COST projects		ME – KONTAKT projects				
OE – EUREKA projects		LA – INGO projects				
OK – EUPRO projects						

## V – 8b OTHER PROJECTS (AKTION, MOBILITY)

Faculty	Type of cooperation	Number
FCE	Aktion, Czech-Polish, Czech-Slovenian, Czech-Slovak, Czech-Norwegian, Visegrad,	6
FME	Aktion, Czech-Polish, Czech-Slovenian, Czech-Slovak, Czech-German, Czech-Austrian	11
FEEC	Czech-Slovenian	1
FIT	Czech-French Cooperation	1
FC	Czech-Slovenian, Czech-Slovak	4
CŠP	isegrad, Phare, some mobility programmes from 5th Framework Programme	6
BUT total		29

## V – 8c INTERNATIONAL PROGRAMMES OF R&D COOPERATION AT BUT

Programme	Cost	Eureka	EUPRO	5th FBM	Kontakt	Ingo	Aktion	Others	Total
FCE number of projects				7			1	6	14
funding ( 000's CZK)				11 071			146	mobility	11 217
FME number of projects	13	7		7	3	2	1	11	44
funding ( 000's CZK)	5 270	3 030		3 152	943	345	5	mobility	12 745
FEEC number of projects	2	1		1	3	1		1	9
funding ( 000's CZK)	747	1 775		2 929	545	40		136	6 172
FIT number of projects			1	1				1	3
funding ( 000's CZK)			241	2 726				mobility	2 967
FA number of projects							1		1
funding ( 000's CZK)							71		71
FC number of projects	2				1			4	7
funding ( 000's CZK)	1 100				600			mobility	1 700
FBM number of projects				1					1
funding ( 000's CZK)				0					0
CŠP number of projects			1					6	7
funding ( 000's CZK)			670					mobility	670
BUT total	17	8	2	17	7	3	3	29	86
funding, total (in 000's CZK)	7 117	4 805	911	19 878	2 088	385	222	136	35 542

## V – 9 PUBLICATION ACTIVITY OF BUT TEACHERS IN 2003

FACULTY	J	P	B	C	D	V	T	A
FCE	140	1	24	44	862	41	8	36
FME	14	0	18	2	436			
FEEC	151	0	2	12	868	29	0	4
FA	39	0	8	2	29	3	1	22
FBM	23	0	12	1	204	5	0	4
FC	68	2	1	5	165			
FFA*	18				3			
FIT	30	0	0	4	146	0	2	1
Total	483	3	65	70	2713	78	11	67

\* exhibitions 41, \* translations 2, J – paper published in a specialised journal, P – patent, B – monograph, C – chapter in a book (not in proceedings), D – paper in conference proceedings, V – reviewed research report for state administration, T – prototype, pilot operation, tested technology (used in manufacture, etc.), A – presentation in the area of R&D (audio-visual presentations, web applications, etc.)

## V - 10 LONG-TERM RESEARCH PROGRAMMES AT BUT (in thousands of czk)

Name	Funding in 2003
Computation and physical modelling of a problems of engineering thermofluid mechanics, mechanics of solids and phase transformations	11 263
Progressive functionally gradient and nano-structural materials	14 970
Development of progressive and highly accurate mechanical engineering technologies	7 611
Environmentally and economically acceptable modern energy producing technologies	7 649
Experimental research into aerodynamic characteristics in flying laboratories	6 116
Development of methods of modelling and control of water management and transport systems	6 318
Theory, reliability and mechanism of failures in structurally and dynamically loaded structures	10 333
Development of and research into new materials from waste materials and guarantees of their higher durability in civil engineering structures	7 409
Non-traditional methods of study of complex and uncertain systems	4 724
Research into sources, accumulation and optimization of electrical energy utilization on environmental applications	4 343
Research into electronic communication systems and technologies	8 424
Research into information and control systems	6 846
Automation of technologies and production processes	4 169
Czech architecture and town planning in a new situation	3 339
Possible development trends in mechanical and electrical engineering companies with a special emphasis on the South Moravian region	2 275
Research into strategic management in Czech undertakings	2 275
Homogenous and heterogeneous materials on the basis of synthetic polymers and biopolymers	3 761
Methods for detection, identification and decontamination of toxic substances and disposal of old hazardous waste dumps	2 629
Research into microelectronic systems and technologies	11 075
Research and development of mechatronic systems	5 555
Subsidies from public funds, total	131 084

## VI – 1 BUT HIGH-SPEED BACKBONE NETWORK

see Page 8

## VI – 2 BUT BACKBONE NETWORK DEVELOPMENT CONCEPT

Location	Access elements			Faculty/departments
	2002	2003	2004	
Antonínská 1	BlackDiamond	BlackDiamond	BlackDiamond	BUT Centre
Božetěchova 2	BlackDiamond	BlackDiamond	BlackDiamond Summit1i	Faculty of Information Technology
Gorkého 13	PC router	PC router	Summit48	Faculty of Business and Management (branch office)
Kolejní 2	Summit7i	Summit7i	Summit7i	BUT Dormitory
Kounicova 46/48	Summit7i	Summit7i	Summit7i	BUT Dormitory
Kounicova 67a	Summit48	Summit48	Summit5i Summit48	BUT Rector's Office (branch office)
Mánesova 12	Summit48	Summit48	Summit1i Summit48	BUT Dormitory
Poříčí 5	Summit1i Summit48	Summit5i Summit48	Summit5i Summit48	Faculty of Architecture
Purkyňova 93	Summit7i	Summit7i	Summit7i	BUT Dormitory
Purkyňova 118	2x Summit7i Summit5i/lx	2x Summit7i Summit5i/lx	2x Summit7i Summit5i/lx	Faculty of Electrical Engineering and Communication Faculty of Chemistry
Rybářská 13/15	Summit 48	Summit48	Summit1i Summit48	Faculty of Fine Arts
Technická 2	BlackDiamond Summit1i	BlackDiamond 2x Summit1i	BlackDiamond Summit1i	Faculty of Mechanical Engineering Faculty of Business and Management
Technická 8	Summit1i	Summit1i	Summit1i	Faculty of Electrical Engineering and Communication
Údolní 19	Summit1i Summit48	Summit1i Summit48	Summit5i Summit48	Faculty of Fine Arts
Údolní 53	Summit 5i	Summit5i	Summit5i	Faculty of Electrical Engineering and Communication
Veveří 95	BlackDiamond	BlackDiamond	BlackDiamond	Faculty of Civil Engineering
Technická 4 *	-	Summit24	Summit24	BUT Technological Incubator
Kolejní 2 **	-	-	BlackDiamond	Faculty of Business and Management Faculty of Electrical Engineering and Communication

\* Technological Incubator launched in 2003    \*\* Start of operation planned for 2004



### VI – 3 LIST OF NEWLY BUILT OPTICAL FIBRE LINKS OF BUT

Route		Length	No. of strands	Note
Veveří 95	Žižkova 22	511 m	16xMM/16xSM	All new optical fibre links are placed in the ground.
Žižkova 22	Kounicova 67a	906 m	12xMM/36xMM	
Purkyňova 118	Mánesova 12	1223 m	36xSM	
Mánesova 12	Božetěchova 2	1371 m	36xSM	
Palackého 1/3	Botanická 68a	1666 m	48xSM	
Technická 2	Technická 4	421 m	8xMM/12xSM	BUT Technological Incubator

*In 2004, commencement of work is planned on the following routes:*

*Botanická 68a – Kounicova 46/48 (List Dormitory) – Kounicova 67a*

*Purkyňova 93 (Purkyně Dormitory) – Hradecká/Královopolská crossroads*

### VII – 1 LIBRARY FUNDING AND STAFF

Library	Faculty	Appropriations (in 000's CZK)	University graduates	Secondary school graduates
Central Library	BUT	7 437	3	5
Purkyně Campus Library	BUT	69	2	4
Technická Campus Library	BUT	855	1	3
Library and Info Centre	FME	580	2	6
Faculty Library	FCE	200	1	2
Faculty Library	FBM	480	-	3
Faculty Library	FFA	60	-	1
Faculty Library	FIT	820	-	1
Libraries at Institutes	FEEC	1 086	-	9 (consolidated: 4.3)

### VII – 2 LIBRARY HOLDINGS AND SERVICES

Library	Faculty	Holdings	2003 Acquisitions	Loans	Registered users	ILS	Intern. ILS
Central Library of BUT	BUT	6 129	340	394	2 323	832	130
Purkyně Campus Library	BUT	20 774	1 755	10 382	4 515	1 173	130
Technická Campus Library	FME	74 039	1 228	8 050	1 304	730	207
Library and Info Centre	FCE	95 915	1 393	13 766	8 468	271	77
Faculty Library	FA	14 830	449	3 487	586	37	8
Faculty Library	FBM	11 987	1 538	8 262	1 925	25	88

Faculty Library	FFA	6 066	246	3 100	363	10	8
Faculty Library	FIT	13 179	1 114	320	350	160	-
Libraries at Institutes	FEEC	45 806	1 732	3 400	880	978	2

### VII – 3 INFORMATION DATABASES

Library	Faculty	Generated	Accessed locally/on the Intranet
Central Library of BUT	BUT	3	41
Purkyně Campus Library	BUT	3	21
Technická Campus Library	FME	3	21
Library and Info Centre	FCE	3	62
Faculty Library	FA	3	21
Faculty Library	FBM	3	21
Faculty Library	FFA	3	21
Faculty Library	FIT	3	21

### VII – 4 LIBRARY STUDY ROOMS

Library	Faculty	Seating capacity	Seats with PC	Daily attendance
Central Library of BUT	BUT	70	45	450
Purkyně Campus Library	BUT	80	39	350
Technická Campus Library	FME	102	17	230
Library and Info Centre	FCE	220	80	600
Faculty Library	FA	60	7	150
Faculty Library	FBM	18	5	130
Faculty Library	FFA	12	1	15
Faculty Library	FIT	12	1	15
Libraries at Institutes	FEEC	49	-	-

### VIII – 1 NUMBER OF TITLES PUBLISHED IN VOTIUM PRESS EDITIONS IN 2003 (BY ISBN AND ISSN)

Textbooks	Monographs	Lecture notes	Proceedings	Research publications	Journals	Total
1	8	1	3	80	1	94

## VIII – 2 TITLES PUBLISHED AT BUT IN 2003 (BY ISBN AND ISSN)

Publisher	Textbooks	Monographs	Lecture notes	Proceedings	Research publications	Journals	Total
FA	-	-	1	5	-	1	7
FCE	-	-	15	9	-	-	24
FEEC	-	1	33	15	-	-	49
FC	-	-	6	2	-	-	8
FIT	-	-	-	4	-	-	4
FBM	-	-	22	10	-	-	32
FME	-	-	24	20	-	-	44
RO	-	-	-	3	-	-	3
VUTIUM	1	8	1	3	80	1	94
Total	1	9	102	71	80	2	265

## IX – 1 PROFESSIONAL STRUCTURE OF BUT EMPLOYEES

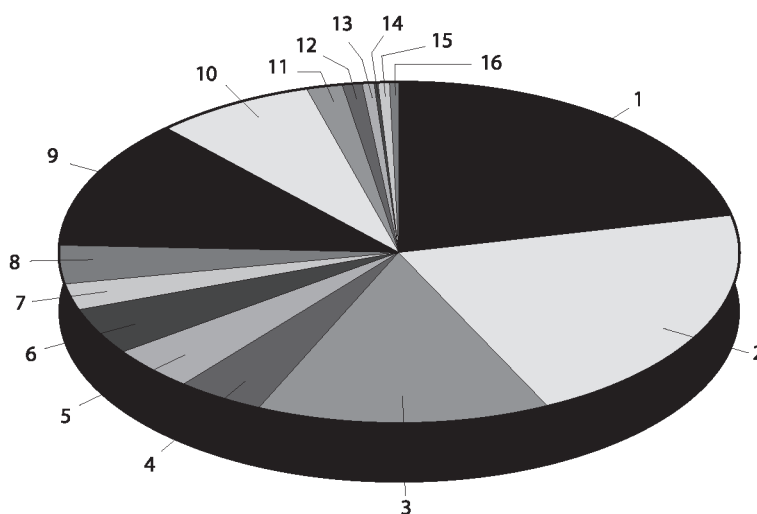
Fac./ dep.	Prof.	Assoc. Prof.	Senior Lectur.	Lectur.	Admin. staff	Blue-collar	Business & oper.	R&D workers	Total	Teaching staff	Teaching and R&D
FME	34.246	80.327	109.102	28.631	171.246	44.110		8.494	476.156	252.306	260.800
FCE	9.077	54.152	158.185	59.812	121.347	65.778		3.458	471.809	281.226	284.684
FEEC	23.249	52.382	67.707	28.573	101.992	30.911		3.900	308.714	171.911	175.811
FA	4.179	13.544	26.754	8.135	20.969	18.713		0.224	92.518	52.612	52.836
FBM	4.042	16.748	29.489	5.536	32.453	2.934		0.726	91.928	55.815	56.541
FC	6.707	13.435	23.741	10.734	34.774	7.578		2.047	99.016	54.617	56.664
FFA	1.992	11.592	11.040	6.997	10.538	13.145			55.304	31.621	31.621
FIT	5.008	9.077	11.950	4.052	32.667	18.006			80.760	30.087	30.087
KMB					63.327	130.450	80.226		274.003		
RO					82.991	84.717			167.708		
IoFE	0.083	0.913			8.734				9.730	0.996	0.996
CL					12.000				12.000		
CISC					37.890				37.890		
CEC			2.495		9.955				12.450	2.495	2.495
CESA			9.380	3.084	5.316	3.120			20.900	12.464	12.464
VUTIUM					4.130				4.130		
BUT	88.583	252.170	449.843	155.554	750.329	419.462	80.226	18.849	2 215.016	946.150	964.999

*Note: average consolidated figures – all sources (all activities)*

## IX – 2a AVERAGE NUMBERS OF EMPLOYEES AT BUT FACULTIES AND ORGANISATIONS

FME	FCE	FEEC	FA	FBM	FC	FFA	FIT	KMB
476.156	471.809	308.714	92.518	91.928	99.016	55.304	80.760	274.003
RO	CISC	CESA	CEC	VUTIUM	CL	IoFE	BUT	
167.708	37.890	20.900	12.450	4.130	12.000	9.730	2 215.016	

Note: average consolidated figures – all sources (all activities)

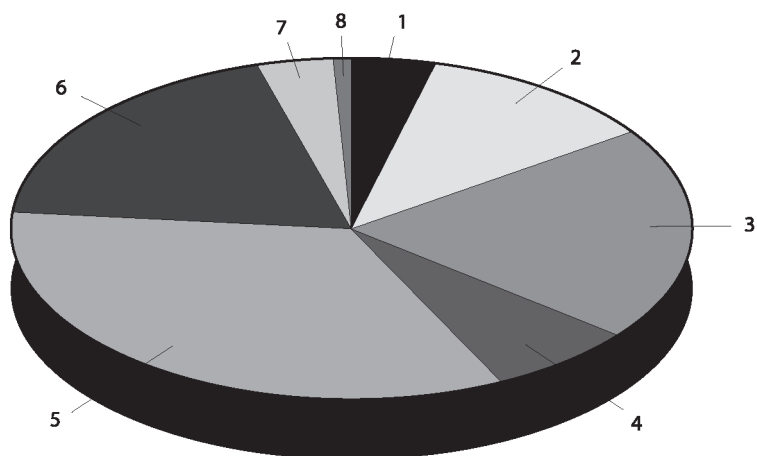


1 – FME    2 – FCE    3 – FEEC    4 – FA    5 – FBM    6 – FC    7 – FFA    8 – FIT    9 – DaR    10 – RO  
 11 – CISC    12 – CESA    13 – CEACO    14 – VUTIUM    15 – CL    16 – IFE

## IX – 2b AVERAGE NUMBERS OF EMPLOYEES ACCORDING TO PROFESSIONS

	Professors	Associate Professors	Senior Lecturers	Lecturers	Admin. staff	Blue-collar workers	Business & Operation Workers	R&D Workers
BUT	88.583	252.170	449.843	155.554	749.520	420.271	80.226	18.849

Note: average consolidated figures – all sources (all activities))



1 – Professor    2 – Assoc. Professor    3 – Senior Lecturers    4 – Asistent    5 – Admin. staff  
 6 – Blue-collar workers    7 – Business & Operation Workers    8 – R&D Staff

### IX – 3 AGE STRUCTURE OF THE TEACHING AND THE R&D STAFFS

Position	Fac.	Below 20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65	Over 65	%
Professor	FCE	0.0	0.0	0.0	0.0	0.0	1.0	1.0	2.0	2.0	0.0	3.3	56.4
	FME	0.0	0.0	0.0	0.0	0.0	0.0	1.0	3.0	5.0	8.1	16.8	62.8
	FEEC	0.0	0.0	0.0	0.0	1.0	0.0	0.5	2.0	6.5	4.0	9.5	60.5
	FA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	1.5	2.5	64.3
	RO	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	64.0
	FFA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0	0.0	56.0
	FIT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	1.0	2.0	0.0	57.0
	FC	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	2.5	1.7	2.1	61.6
	FBM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.0	2.0	1.0	62.7
Professors, total		0.0	0.0	0.0	0.0	1.0	1.0	3.5	10.5	20.0	21.3	35.2	61.1
Assoc. Professors	FCE	0.0	0.0	0.0	1.0	0.0	8.5	4.0	16.3	14.8	8.5	0.0	52.7

	FME	0.0	0.0	0.0	0.0	4.0	5.0	8.5	16.3	15.2	13.3	16.6	55.8
	FEEC	0.0	0.0	0.0	0.0	2.0	4.0	3.4	7.8	9.3	14.8	9.3	57.1
	FA	0.0	0.0	0.0	0.0	0.0	1.0	0.0	3.6	5.0	2.0	1.0	56.2
	FFA	0.0	0.0	0.0	0.0	0.0	4.0	3.0	2.0	1.0	1.6	0.0	49.0
	FIT	0.0	0.0	0.0	1.0	1.0	0.0	1.0	1.0	5.0	0.0	1.2	52.7
	FC	0.0	0.0	0.0	0.0	0.0	3.0	2.5	4.0	1.3	1.5	0.8	52.1
	FBM	0.0	0.0	0.0	0.0	0.0	2.0	4.1	2.0	1.0	5.3	2.0	54.6
Ass. Professors, total		0.0	0.0	0.0	2.0	7.0	27.5	26.5	53.0	52.6	47.0	30.9	54.7
Senior Lecturers	FCE	0.0	0.0	5.0	13.0	9.0	19.5	26.6	41.7	20.5	20.2	1.0	48.5
	FME	0.0	0.0	6.5	18.9	6.5	9.8	15.6	14.0	16.6	20.1	6.0	48.2
	FEEC	0.0	0.0	5.0	9.2	5.3	6.0	11.0	11.0	9.4	8.3	2.2	47.0
	FA	0.0	0.0	0.0	3.0	3.0	3.0	4.0	5.0	8.0	2.0	0.0	48.4
	RO	0.0	0.0	0.0	0.0	0.0	1.0	3.0	1.0	1.0	4.0	0.0	54.0
	FFA	0.0	0.0	0.0	0.0	0.0	2.0	5.3	2.7	1.0	0.0	0.0	48.6
	FIT	0.0	0.0	2.0	3.0	3.0	1.0	0.0	1.0	0.0	1.0	0.0	38.2
	FC	0.0	0.0	2.5	5.0	2.0	3.0	4.5	3.2	3.7	0.8	0.0	43.4
	FBM	0.0	0.0	3.6	2.5	2.5	5.0	6.5	1.8	2.8	2.9	0.0	44.9
Senior Lecturers, total		0.0	0.0	24.6	54.6	31.3	50.3	76.5	81.4	63.0	59.3	9.2	47.6
Lecturers	FCE	0.0	1.4	32.7	12.6	7.5	5.0	0.0	0.0	1.0	0.0	0.0	30.9
	FME	0.0	1.0	13.0	5.0	1.8	2.0	1.0	0.0	1.0	0.0	0.0	31.8
	FEEC	0.0	0.7	14.5	6.0	4.8	2.5	0.0	0.0	0.0	0.0	1.9	33.7
	FA	0.0	0.0	2.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	33.8
	RO	0.0	0.0	0.5	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	38.4
	FFA	0.0	0.0	1.0	2.0	2.0	2.5	0.0	0.0	0.0	0.0	0.0	36.6
	FIT	0.0	0.0	8.4	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27.5
	FC	0.0	0.0	5.0	1.0	2.0	1.0	0.0	0.0	0.0	0.0	0.0	31.6
	FBM	0.0	0.0	3.1	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	29.9
Lecturers, total		0.0	3.1	80.2	28.6	22.1	17.0	1.0	0.0	2.0	0.0	1.9	31.9
R&D Staff	FCE	0.0	0.0	1.0	0.0	0.0	1.0	0.9	0.0	0.0	0.0	1.2	48.1
	FME	0.0	0.0	2.0	1.0	2.0	1.0	1.0	0.0	1.4	0.0	0.0	40.0
	FEEC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	2.8	0.6	61.2
	FC	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	43.5
	FBM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	61.0
R&D Staff, total		0.0	0.0	3.0	2.0	2.0	2.0	1.9	0.5	2.3	3.8	1.8	47.4

*Situation at 31.12.2003. Includes all fulltime and parttime employees of all categories.*

## X – 1 INTERNATIONAL DIRECT COOPERATION AGREEMENTS BETWEEN UNIVERSITIES

Agreements signed in 2003	New agreements prepared for 2004
Glasgow University /UK/	Insa Lyon /France/
East-Ukrainian National University, Lugansk /Ukraine/	Kiev Polytechnic Institute /Ukraine/
University of Technology, Opol /Poland/	Moscow Energy Institute /Russia/
Malta University /Malta/	Technical University of Košice /Slovakia/
	Technical University of Bratislava /Slovakia/
	Technical and Agricultural Academy FS Bydgoszcz /Poland/
	Warsaw Polytechnic /Poland/
	Technical University of Leipzig /Germany/
	Technical University of Dresden /Germany/

## X – 2 SOCRATES / ERASMUS – COMPARISON OF ACTIVITIES IN ACADEMIC YEAS

Activity	1999/2000	2000/2001	2001/2002	2002/2003	Plan for 2003/ 2004
<b>Student mobility</b>					
Number of students	70	110	121	156	234
Number of months	311	577	700	993	1521
<b>Teacher mobility</b>					
Number of teachers	32	43	60	94	154
Number of weeks	33	71	106	132	240

## X – 3 STAYS ABROAD OF TEACHERS AND STUDENTS OF BUT FACULTIES UNDER SOCRATES/ERASMUS PROGRAMMES IN ACADEMIC YEARS 2001/2002 AND 2002/2003

Fac.	Teachers (persons)	Teachers (weeks)	Teachers (persons)	Teachers (weeks)	Students (persons)	Students (weeks)	Students (persons)	Students (weeks)
	2001/2002	2001/2002	2002/2003	2002/2003	2001/2002	2001/2002	2002/2003	2002/2003
FCE	7	10	13	21	15	90	23	149

FME	18	41	21	30	23	136	33	234
FEEC	11	16	23	29	19	104	22	120
FIT	7	8	6	6	8	69	7	42
FA	8	11	11	14	15	109	19	161
FBM	4	7	12	15	23	135	29	197
FC	-	-	3	7	2	6	7	33
FFA	5	13	5	10	16	51	16	57
BUT	60	106	94	132	121	700	156	993

## X – 4 MONITORING AND PREPARATORY TRIPS IN ACADEMIC YEAR 2002/2003

Category	Faculty	University visited	Country
Preparatory	FA	Universitat Politècnica de Valencia	Spain
Monitoring	FFA	Accademia di Brera	Italy
Preparatory	FEEC	RWTH Aachen	Germany
Monitoring	FEEC	Universitat de Zaragoza	Spain
Preparatory	FEEC	Universität Magdeburg	Germany
Monitoring	FEEC	HTWK Leipzig	Germany
Preparatory	FFA	Johannes Gutenberg Universität Mainz	Germany
Monitoring	RO	University Uppsala, KTH Stockholm	Sweden
Preparatory	FC	Università degli Studi di Trieste	Italy

## XII – 1 UTILIZATION OF BED CAPACITY AT BUT HALLS OF RESIDENCE IN 2003

Hall of residence	Number of beds	Beds for students	Unsatisfied demand	Isolation rooms	Others
PPV Kolejní 2	3 315	3 148 (3 143*)	560	8	164
Purkyňovy Purkyňova 93	2 268	2 248		12	8
Listovy Kounicova 46/48	1 042	1 030			12
Mánesovy Mánesova 12	264	261		2	
Total	6 889	6 682	560	23	184

Note: (\*) In September 2003, five beds at the hall of Residence at Pod Palackého chrám (PPV) were made available for accommodation of BUT employees. The "others" column lists beds that are made available for accommodation of guests of the BUT rector's office, individual faculties, of foreign lecturers and BUT employees.



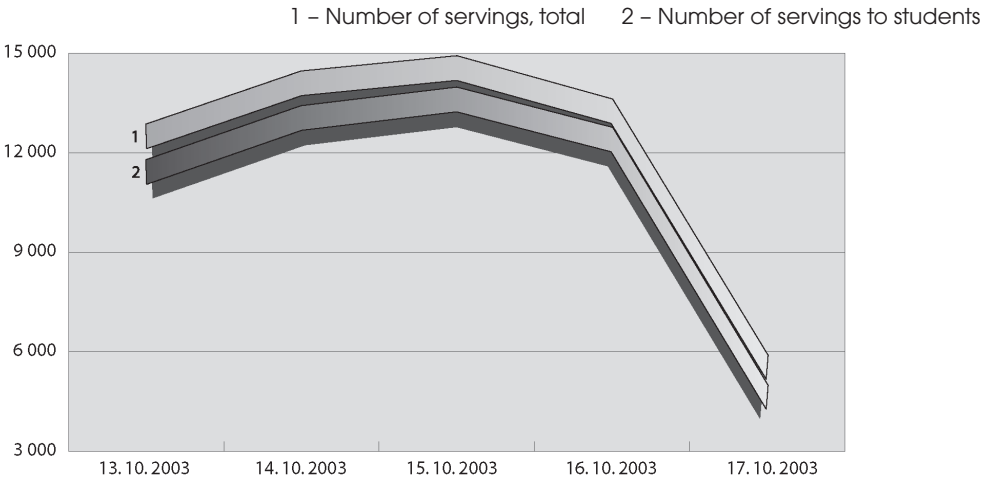
**XII – 2 NUMBERS OF MEALS SOLD IN STUDENT CANTEENS**

Canteen	Number of meals		Change compared with 2002	
	2002	2003	+ increase/- decrease	03/02 index in %
Kolejní	314 437	311 109	- 3 328	98.95
Kounicova 46/48	510 474	570 753	+ 60 279	111.81
Purkyňova 93	582 746	623 555	+ 40 809	107.00
Total	1 407 657	1 505 417	+ 97 760	106.95

**XII – 3 NUMBERS OF MEALS SERVED IN A WEEK**

Day	Number of servings to students	Number of servings, total
13. 10. 2003	11772	12847
14. 10. 2003	13402	14448
15. 10. 2003	13961	14907
16. 10. 2003	12751	13606
17. 10. 2003	4982	5889
Total	56868	61697
Daily average	11374	12339

**Numbers of Meals served in a week**



## XII – 4a STUDENT CARE – ACCOMMODATION AND MEALS

University	
Number of beds in BUT halls of residence, total	6889
Beds for students	6682
Beds for staff	72
Beds for BUT guests	32
Number of beds in hired facilities	201
No. of accommodation applications in academic year	9207
No. of granted applications at 31. 10. 2003	7138

Accommodation prices (in CZK) per month	Students	BUT staff	Others
A – cell system	1160	1195	2300
B – multiple-bed rooms	880		
C – others	900		
Price of 1 principal dish (in CZK)	16.50/23	16.50/23	42/48.50
Principal dishes served in the academic year, total	1693756	116770	95057

## XII – 4b BUT HALLS OF RESIDENCE AND THEIR ACCOMMODATION CAPACITY

Hall of residence	Number of beds
Kolejní 2	3333
Purkyňova 93	2268
Kounicova 46/48	1042
Mánesova 12	264
Celkem	6907

## XII – 4c BUT CAFETERIAS AND THEIR MAXIMUM DAILY PRODUCTION CAPACITIES

Cafeteria	Type of operation	Number of dishes
Kolejní 2	cooking and selling	2000
Purkyňova 93	cooking and serving	6500
Kounicova 46/48	cooking and serving	2200
Technická 2	cooking and serving	700
Technická 8	cooking and serving	600
Veveří 95	cooking and serving	900

Technická 2 - zam. jídelna	serving dishes	100
Antonínská 1	serving dishes	0
Purkyňova 118	serving dishes	0
Total		13000

**XIII 3 – 1 STUDIES, EXPERT OPINIONS, LITERATURE SEARCHES** (in thousands of CZK)

BUT	
Total	564

**XIII 3 – 2 REPAIRS AND OTHER BUILDING ACTIVITIES FUNDED FROM NON-INVESTMENT FUNDS OF BUT BRNO** (in thousands of CZK)

Project	
Reconstruction and repair of Building A, Veveří 95	16561
Interior furnishings for Integrated Structure	10
Repair of Building A, Poříčí 5	27
Primary equipment	79
Reconstruction of the southern enclosure no. 1, Božetěchova 2	791
Incubator of new technologies at PPV	46
Repair of the courtyard at Údolní 19	151
Repair of roofs of the building at Údolní 19	547
Anti-flooding measures at the plot at Božetěchova	224
Repair of sanitary facilities at Building A4, Technická 2	644
Electrical cabling in Building B, Poříčí 5	1945
Repair of sanitary facilities at the gym at Údolní 53	362
Repair of the façade and attic gable gutters, Poříčí 5	139
Total	21526

**XIII 3 – 3 IMPLEMENTATION OF DECISION TO MOVE FACULTIES, INSTITUTES AND DEPARTMENTS** (in thousands of CZK)

BUT	
Total	195

**XIII 3 – 4 EMERGENCY REPAIRS FUNDED FROM NON-INVESTMENT FUNDS OF BUT**  
(in thousands of CZK)

BUT	
Total	2218

**XIII 3 – 5 NON-INVESTMENT SUBSIDIES FOR FUNDING OF NON-INVESTMENT  
– PART OF THE PRTOPEY REPRODUCTION PROGRAMME** (in thousands of CZK)

Project	
Rec.n of ventilation systems, P1 – P6 at A5, Technická 2	418
Repair of sanitary facilities at the gym at Údolní 53	3699
Electrical cabling at the Building B at Poříčí 5	3301
Reconstruction and repair of Building A, Veveří 95	3700
Rec.n and repair of Building A, Veveří 95- BUT reserve fund	3427
Reconstruction of southern enclosure no.1, Božetěchova	2000

**XIII 3 – 6 HALLS OF RESIDENCE AND CAFETERIAS PROJECT** (in thousands of CZK)

BUT	
Total	1 396

**XIII 3 – 7a USE OF INVESTMENT FUNDS IN BUT CONSTRUCTION PROJECTS IN 2003**

Project	MoE	BUT	Gifts	Total
Integrated building of FoBM and FoECT at PPV	194 500	4 551		199 051
Incubator of new technologies at PPV (MoIT)	5 000	17 100		22 100
Rec.n of ventilation systems, Rooms P1 – P6 at A5, PPV	5 000	1 046		6 046
Reconstruction and completion of Božetěchova campus		2 933		2 933
Reconstruction and repair of Building A at Veveří 95		26 474		26 474
Reconstruction of Building F at Veveří 95		19 379		19 379
Rec.n of southern enclosures nos 3 and 4 at Božetěchova		17		17
Heating system rec.n at FoME, Technická 2, Stage 2		3 519		3 519
Computer rooms at FoC campus, Purkyňova 118		1 505		1 505
Experimental house with hybrid ventilation (MoIT)	960	1 700	1 292	3 952

Reconstruction of Building A at Poříčí 5		168		168
Converting studios on 4th floor, Building B, Poříčí 5 to offices		848		848
Monitoring system, FoCE	3 500	221		3 721
Converting a facility to dining room, Božetěchova 2		214		214
Reconstruction of southern enclosure no. 1, Božetěchova		266		266
Installation of thermostatic valves	2 000	353		2 353
Reconstruction of gas boiler room at Údolní 19	1 940	193		2 133
Reconstruction of nozzle laboratory, Building C3, FoME		7		7
Computer and IT networks		4 167		4 167
Layout changes in teaching rooms, A4, Technická 2		545		545
Extension of the transformer station, Veveří 95		832		832
Structures surrounding Integ. Building (hard standings, roads.)		527		527
Construction changes in server room at Údolní 19		487		487
Outside platform for the disabled, FoME, Technická 2		1 071		1 071
Photovoltaic system, Technická 2 (State Environment Fund)	3 785	1 104	1 465	6 354
Heating for Integrated Building		460		460
Electrical cabling in Building B at Poříčí 5		127		127
Installation of fire-alarm system at A04, A05 at Kolejní 2		1 933		1 933
Construction work at A1, A2, B2 at Technická 2		592		592
Construction work at A3 and 5, 6th floor, Technická 2		109		109
Structured cabling for A1, A2, A3, B2, Technická 2		113		113
Gym floor		105		105
Total cost of construction projects	216 685	92 664	2 757	312 106

### XIII 3 – 7b USE OF INVESTMENT FUNDS IN CONSTRUCTION PROJECTS AT HALLS OF RESIDENCES AND CAFETERIAS

Dormitories	MoE	BUT	Gifts	Total
Reconstruction of electrical cabling at Purkyňova HoR		5 089		5 089
Extension of accommodation capacity, Block K1/PPV		686		686
Cafeteria at Kounicova – air-conditioning in pantries		139		139
Cafeteria at Purkyňova – reconstruction of cooking vessels and support areas – Stage 2		2 400		2 400
PPV HoR – ventilation in emergency exit routes		625		625
PPV HoR – extension of security system		595		595
PC network “Kolejnet”, PPV and Kounicova dormitories		1 719		1 719
Construction work projects at HoRC		11 253		11 253

### XIII 3 – 7c OVERVIEW OF BUT CONSTRUCTION WORK INVESTMENTS

BUT projects	MoE	BUT	Gifts	Total
Total	216 685	103 917	2 757	323 359

### XIII 3 – 8 USE OF INVESTMENT FUNDS ON PURCHASE OF MACHINES AND EQUIPMENT OF NOT INCLUDED IN COSTS

Unit	Fixed assets develop.fund	Subsidies	Grants	Subsidies from abroad	Total
FoCE	7 148	1 580	10 658	144	19 530
FoME	10 403	1 600	38 465		50 468
FoECT	6 920	1 050	15 529		23 499
FoA	1 044	280	2 027		3 351
FoFA	1 035	220	3 045		4 300
FoIT	2 043	420	944		3 407
FoC	3 258	500	6 627		10 385
FoBM	1 919	350	1 128		3 397
RO	1 887	0	2 808		4 695
HoRC	4 985	0	0		4 985
University	3 140	0	16 000		

### XIII 3 – 9 SELECTED CIVIL ENGINEERING PROJECTS OF THE BUILDING COMMISSION IN 2003

Project 2003	Total costs in thousands of CZK
Integrated building of FoBM and FoECT on PPV campus	199 051
Structures surrounding Integrated Building	527
Reconstruction of VZT rooms. P1 – P6 at A5, PPV	6 464
Incubator of new technologies on PPV campus	22 146
Reconstruction of heating system at FoME, Technická 2	3 519
Reconstruction and completion of Božetěchova campus	2 933
Rec.n of southern enclosure no. 1, Božetěchova 2	3 057
Reconstruction and repair of Building A at Veveří 95	50 163
Reconstruction of Building F at Veveří 95	19 379
Computer and IT networks	4 167

Repair of sanitary facilities at gym at Údolní 53	4 061
Installation of thermostatic valves	2 353
Monitoring system at FaCE	3 721
Reconstruction of boiler room at Údolní 19	2 133
Experimental building with hybrid ventilation	3 953
Electrical cabling in Building B at Poříčí 5	5 373
Installation of photovoltaic system at Technická 2	6 354

#### XIII 4 – 1 PROGRAMMES OF THE HIGHER EDUCATION DEVELOPMENT FUND AT BUT

Thematic classification	No. of projects accepted	Funds allocated (in thousands of CZK)		
		investment	non-investment	total
A	7	14 219	0	14 219
B	0	0	0	0
C	4	0	783	783
E	4	2 558	568	3 126
F	50	0	9 265	9 265
G	90	0	10 723	10 723
H	6	11 6820	0	11 682
Total	161	21 339	28 459	49 798

#### XV – 1 REGISTRATION AND AMENDMENTS IN REGISTRATION OF IN-HOUSE REGULATIONS IN 2003

Regulation	Approved by AS BUT	In force from
Amendments to Payroll Regulations of Brno University of Technology (Amendment 5)	14/1/2003	28/1/2003
Changes of and amendments to the Employment Regulations of BUT (Amendment 2)	11/3/2003	1/5/2003

Edited by Centrum in Brno in 2004.  
Editor PhDr. Jitka Vanýsková.  
Design and DTP by dagmarah@email.cz.  
Printed by Expodata-Didot.  
In an edition of 400 copies.



ISBN 80-214-2679-9



9 788021 426795